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APPENDICES

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Appendix A

Sampling sites, date of collection and species of oysters (preliminary investigated based on morphology characters)

Code of samples	Location	Date of collection	Species
Cb 001	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 002	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 003	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 004	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 005	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 006	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 007	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 008	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 009	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 010	Suratthani	16/03/1999	<i>C. belcheri</i>
Cb 011	Ban Na Thab, Songkhla	04/06/1998	<i>C. belcheri</i>
Cb 012	Ban Na Thab, Songkhla	04/06/1998	<i>C. belcheri</i>
Cb 013	Ban Na Thab, Songkhla	04/06/1998	<i>C. belcheri</i>
Cb 014	Ban Na Thab, Songkhla	04/06/1998	<i>C. belcheri</i>
Cb 015	Ao Khao Yau, Ranong	01/06/1998	<i>C. belcheri</i>
Cb 016	Ao Khao Yau, Ranong	01/06/1998	<i>C. belcheri</i>
Cb 017	Ao Khao Yau, Ranong	01/06/1998	<i>C. belcheri</i>
Cb 018	Bo Tho restaurant, Krabi	07/04/1998	<i>C. belcheri</i>
Cb 019	Bo Tho restaurant, Krabi	07/04/1998	<i>C. belcheri</i>
Cb 020	Bo Tho restaurant, Krabi	07/04/1998	<i>C. belcheri</i>
Ci 021	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 022	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 023	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 024	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 025	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 026	Sriracha, Chonburi	06/10/1998	<i>C. iredalei</i>
Ci 027	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>C. iredalei</i>
Ci 028	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>C. iredalei</i>
Ci 029	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>C. iredalei</i>
*Oy 030	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>S. forskalli</i>
Ci 031	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>C. iredalei</i>

Appendix A (continued)

Code of samples	Location	Date of collection	Species
Ci 032	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
Ci 033	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
Ci 034	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
Ci 035	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
Ci 036	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
Ci 037	Ban Na Thab, Songkhla	04/06/1998	<i>C. tredalei</i>
*Ci 038	Ao Khao Yau, Ranong	01/06/1998	<i>C. tredalei</i>
*Oy 039	Ao Khao Yau, Ranong	01/06/1998	<i>C. tredalei</i>
Ci 040	Kog Krai, Phangnga	07/04/1998	<i>C. tredalei</i>
Ci 041	Kog Krai, Phangnga	07/04/1998	<i>C. tredalei</i>
Ci 042	Kog Krai, Phangnga	07/04/1998	<i>C. tredalei</i>
Ci 043	Kog Krai, Phangnga	07/04/1998	<i>C. tredalei</i>
Sc 044	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 045	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 046	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 047	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 048	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 049	Koh Phi, Trad	01/08/1998	<i>S. cucullata</i>
Sc 050	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 051	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 052	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 053	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 054	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 055	Koh Nui, Ranong	09/05/1998	<i>S. cucullata</i>
Sc 056	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 057	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 058	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 059	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 060	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 061	Koh Al, Phuket	08/04/1998	<i>S. cucullata</i>
Sc 062	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sc 063	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sf 064	Chantraburi	21/05/1998	<i>S. forskali</i>
Sc 065	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sc 066	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sc 067	Chantraburi	21/05/1998	<i>S. cucullata</i>

Appendix A (continued)

Code of samples	Location	Date of collection	Species
Sf 068	Angsila, Chonburi	17/02/1998	<i>S. forskali</i>
Sf 069	Angsila, Chonburi	17/02/1998	<i>S. forskali</i>
Sf 070	Angsila, Chonburi	17/02/1998	<i>S. forskali</i>
Sf 071	Angsila, Chonburi	17/02/1998	<i>S. forskali</i>
Sc 072	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sc 073	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sc 074	Chantraburi	21/05/1998	<i>S. cucullata</i>
Sf 075	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 076	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 077	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 078	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 079	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 080	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 081	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 082	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 083	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 084	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 085	Ban Pak Bara, Satun	04/08/1998	<i>S. forskali</i>
Sf 086	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 087	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 088	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 089	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 090	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 091	Ao Khao Yau, Ranong	01/06/1998	<i>S. forskali</i>
Sf 092	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>S. forskali</i>
Sf 093	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>S. forskali</i>
Sf 094	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	<i>S. forskali</i>
*Oy 095	Klong Bang Nang Rom, Prachuapkririkhan	02/06/1998	A hybrid between <i>C. iredalei</i> and <i>C. belcheri</i>
Sf 096	Ban Na Thab, Songkhla	04/06/1998	<i>S. forskali</i>
Sf 097	Ban Na Thab, Songkhla	04/06/1998	<i>S. forskali</i>
Sf 098	Ban Na Thab, Songkhla	04/06/1998	<i>S. forskali</i>
Sf 099	Ban Na Thab, Songkhla	04/06/1998	<i>S. forskali</i>
Sf 100	Ban Na Thab, Songkhla	04/06/1998	<i>S. forskali</i>

Appendix A (continued)

Code of samples	Location	Date of collection	Species
Sf 101	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 102	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 103	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
*Oy 104	Koh Sichang, Chonburi	07/05/1999	<i>C. iredalei</i> -like oyster
Sf 105	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 106	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 107	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 108	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 109	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 110	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 111	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 112	Koh Sichang, Chonburi	07/05/1999	<i>S. forskali</i>
Sf 113	Chantraburi	21/05/1998	<i>S. forskali</i>
*D 114	Chantraburi	21/05/1998	<i>Dendostrea sp.</i>
*D 115	Chantraburi	21/05/1998	<i>D. folium</i>
Sf 116	Chantraburi	21/05/1998	<i>S. forskali</i>
*D 117	Chantraburi	21/05/1998	<i>D. folium</i>
Sf 118	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 119	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 120	Chantraburi	21/05/1998	<i>S. forskali</i>
*Oy 121	Chantraburi	21/05/1998	<i>Saccostrea sp.</i> -like oyster
*Oy 122	Chantraburi	21/05/1998	<i>Saccostrea sp.</i> -like oyster
Sf 123	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 124	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 125	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 126	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 127	Chantraburi	21/05/1998	<i>S. forskali</i>
Sm 128	Chantraburi	21/05/1998	<i>S. mytiloides</i>
Sm 129	Chantraburi	21/05/1998	<i>S. mytiloides</i>
Sf 130	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 131	Chantraburi	21/05/1998	<i>S. forskali</i>
Sf 132	Chantraburi	21/05/1998	<i>S. forskali</i>
*D 133	Chantraburi	21/05/1998	<i>D. folium</i>
Sf 134	Chantraburi	21/05/1998	<i>S. forskali</i>
Sm 135	Laem Phun Wa, Phuket	08/04/1998	<i>S. mytiloides</i>
Sm 136	Laem Phun Wa, Phuket	08/04/1998	<i>S. mytiloides</i>
Sm 137	Laem Phun Wa, Phuket	08/04/1998	<i>S. mytiloides</i>
Sm 138	Laem Phun Wa, Phuket	08/04/1998	<i>S. mytiloides</i>

Appendix A (continued)

Code of samples	Location	Date of collection	Species
Sm 139	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 140	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 141	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 142	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 143	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 144	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 145	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 146	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 147	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 148	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 149	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 150	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 151	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 152	Ranong	09/01/1999	<i>S. mytiloides</i>
Sm 153	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 154	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
Sm 155	Samut Sakhon	10/12/1999	<i>S. mytiloides</i>
S3 156	Samut Sakhon	10/12/1999	<i>Saccostrea sp.</i> group 3
S3 157	Samut Sakhon	10/12/1999	<i>Saccostrea sp.</i> group 3
S3 158	Samut Sakhon	10/12/1999	<i>Saccostrea sp.</i> group 3
S3 159	Samut Sakhon	10/12/1999	<i>Saccostrea sp.</i> group 3
S3 160	Samut Sakhon	10/12/1999	<i>Saccostrea sp.</i> group 3
Cs 161	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 162	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 163	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 164	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 165	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 166	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 167	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 168	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
Cs 169	Klong Bo Tho, Krabi	07/04/1998	<i>Crassostrea sp.</i>
S1 170	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea sp.</i> group 1
Sf 171	Koh Prab, Suratthani	04/04/1998	<i>S. forskali</i>
Sf 172	Koh Prab, Suratthani	04/04/1998	<i>S. forskali</i>
Sf 173	Koh Prab, Suratthani	04/04/1998	<i>S. forskali</i>

Appendix A (continued)

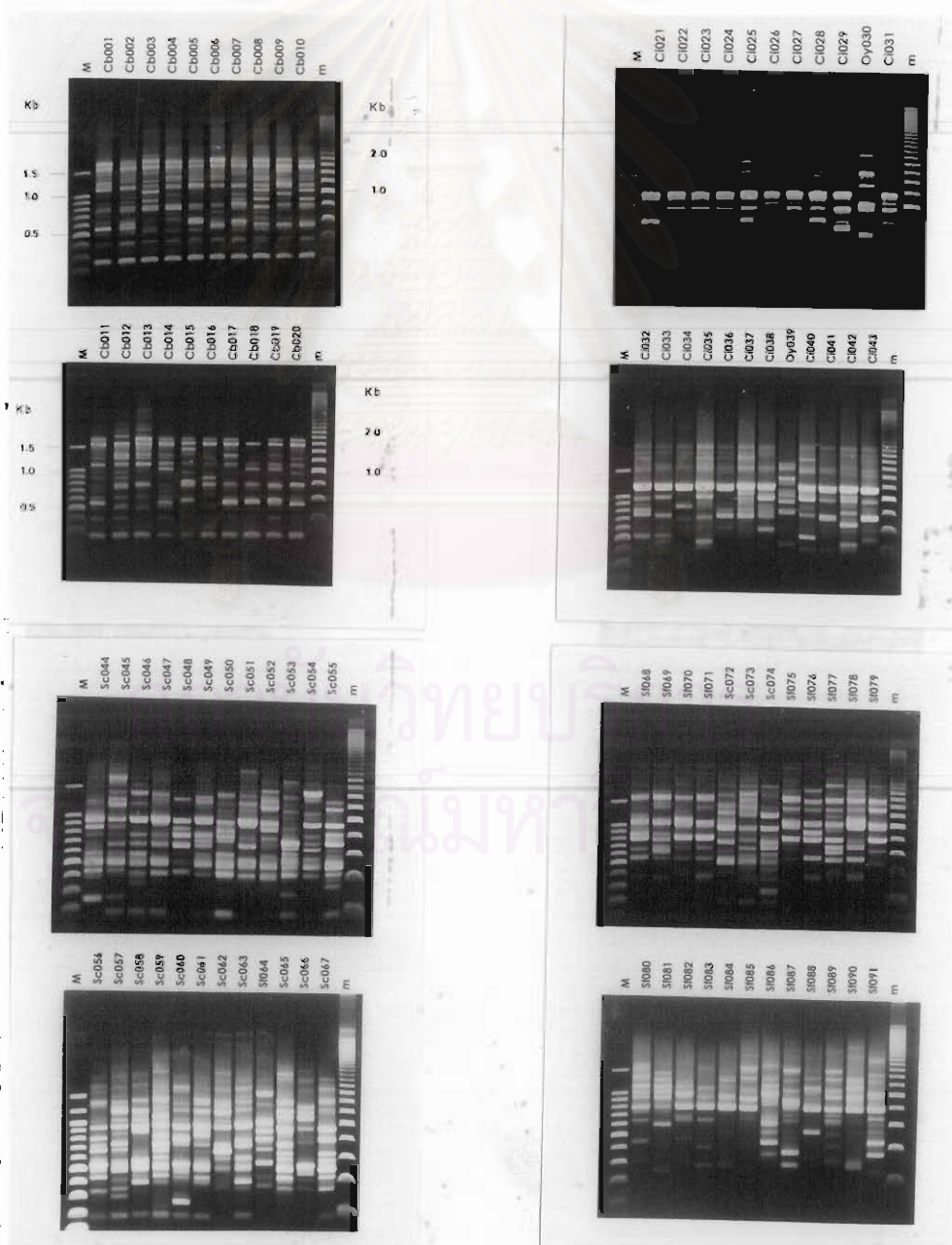
Code of samples	Location	Date of collection	Species
S1 174	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 175	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 176	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 177	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 178	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 179	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 180	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S1 181	Koh Prab, Suratthani	04/04/1998	<i>Saccostrea</i> sp. group 1
S2 182	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 183	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 184	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 185	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 186	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 187	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 188	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 189	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
S2 190	Koh Nui, Ranong	09/05/1998	<i>Saccostrea</i> sp. group 2
Scom 01	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 02	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 03	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 04	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 05	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 06	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 07	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 08	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 09	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 10	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 11	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Scom 12	Brisbane, Australia	25/10/1998	<i>S. commercialis</i>
Pv 01	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 02	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 03	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 04	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 05	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 06	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 07	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 08	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 09	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 10	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 11	Chonburi	04/06/1999	<i>P. viridis</i>
Pv 12	Chonburi	04/06/1999	<i>P. viridis</i>

* These specimens were not included in data analysis.

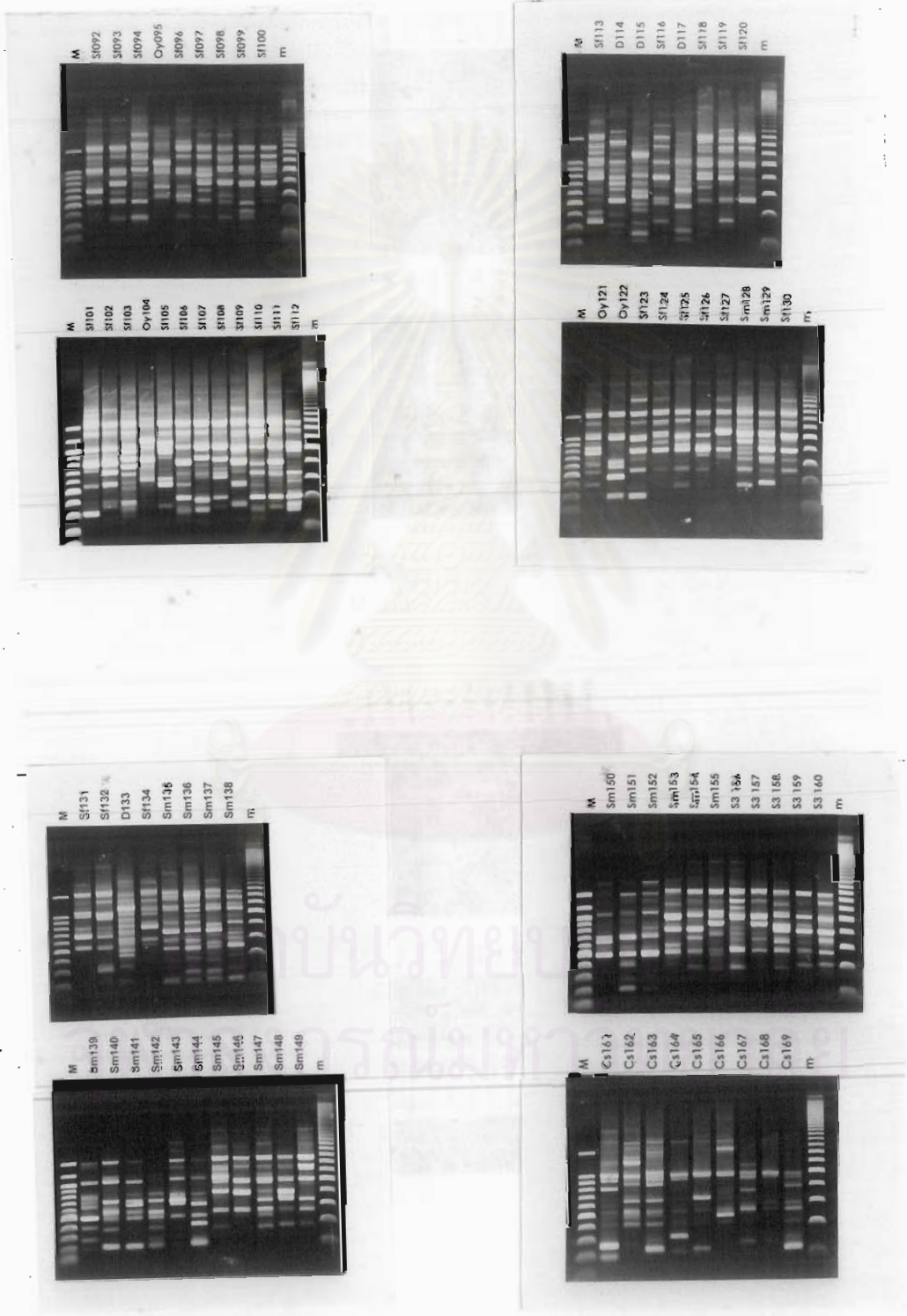
Appendix B

RAPD patterns of all individuals of *C. belcheri* (n = 20), *C. iredalei* (n = 20), *S. cucullata* (n = 26), *S. forskali* (n = 58), *S. mytiloides* (n = 23), *Crassostrea sp.* (n = 9), *Saccostrea sp.* group 1 (n = 9), *Saccostrea sp.* group 2 (n = 9), *Saccostrea sp.* group 3 (n = 5), *S. commercialis* (n = 12) and *P. viridis* (n = 12) resulted from primers OPA09 (B.1), OPB01 (B.2), OPB08 (B.3), UBC210 (B.4) and UBC220 (B.5). The DNA markers were a 100 bp (Lane M) and a 200 bp (Lane m) ladders, respectively.

B.1 primer OPA09



B.1 primer OPA09 (continued)

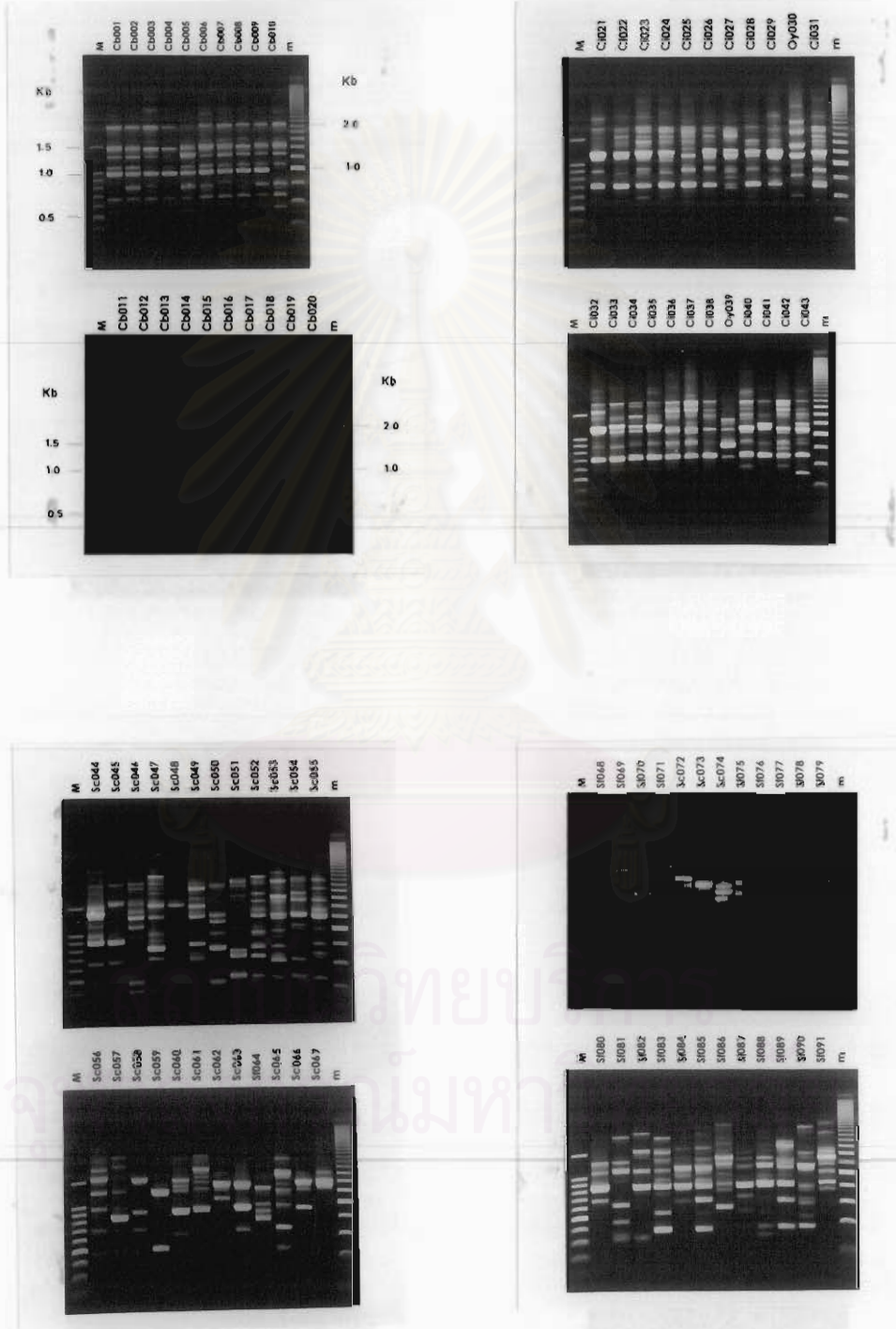


B.1 primer OPA09 (continued)

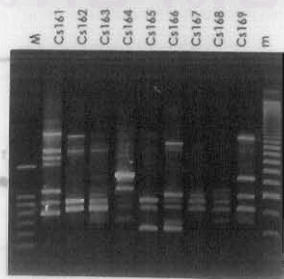
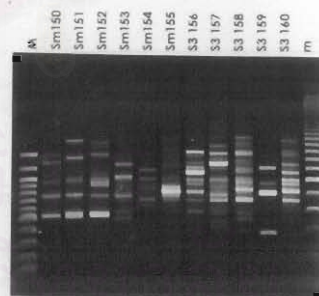
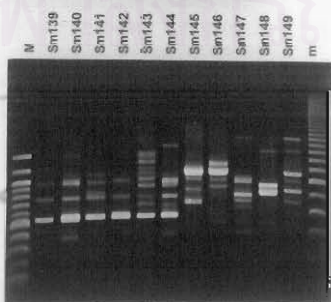
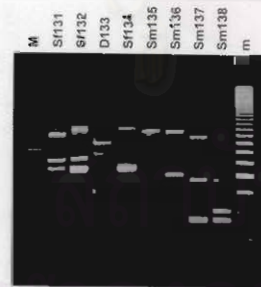
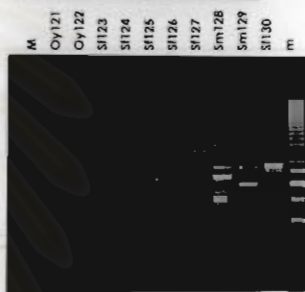
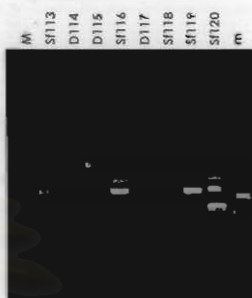
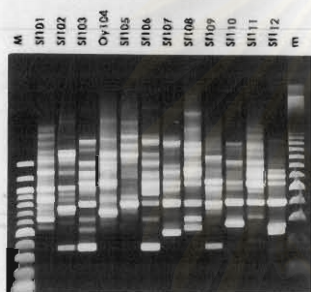
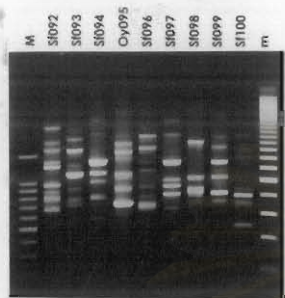


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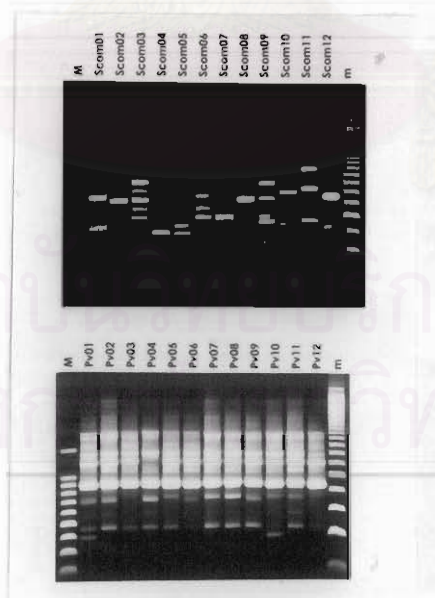
B.2 primer OPB01



B.2 primer OPB01 (continued)

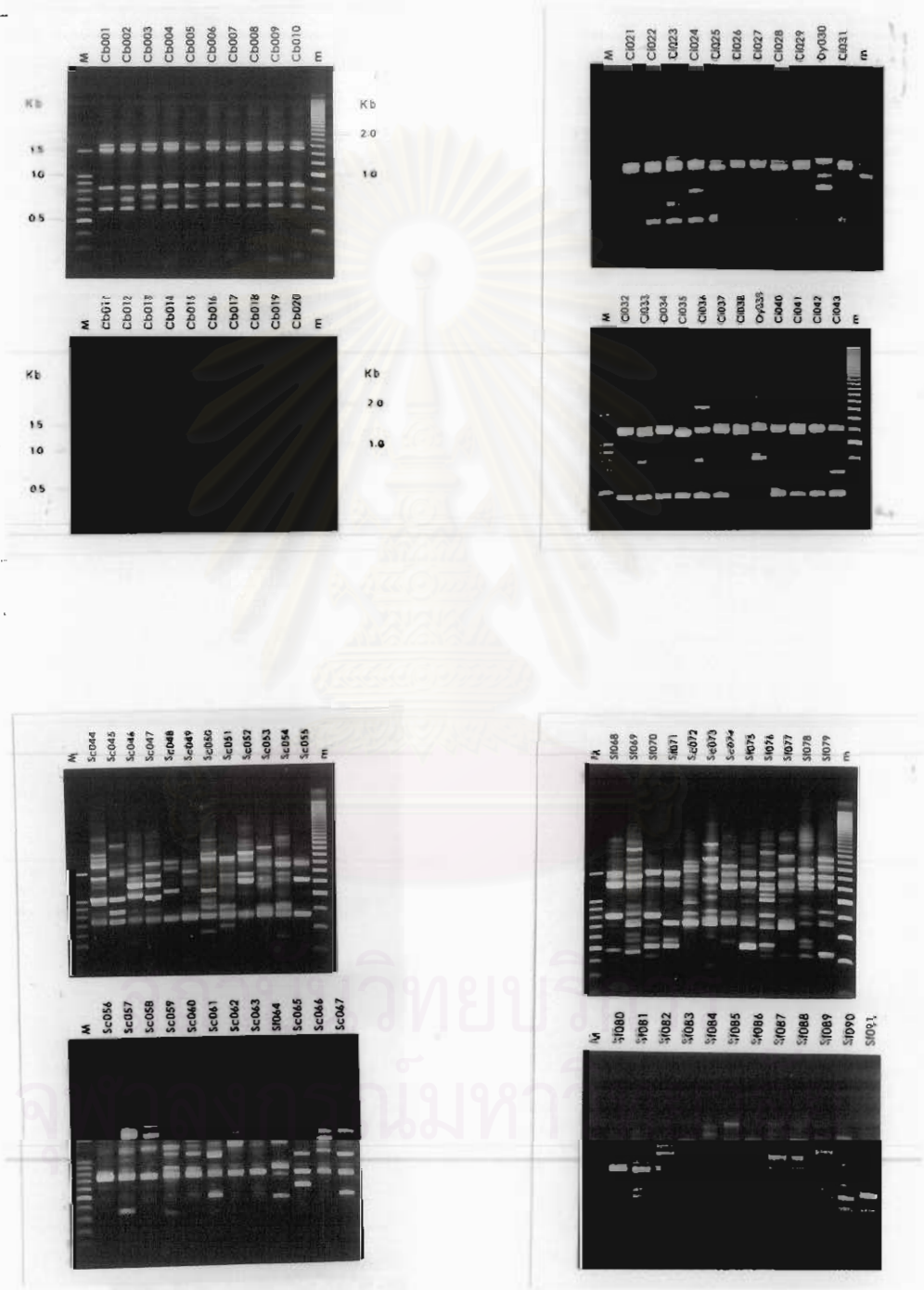


B.2 primer OPB01 (continued)

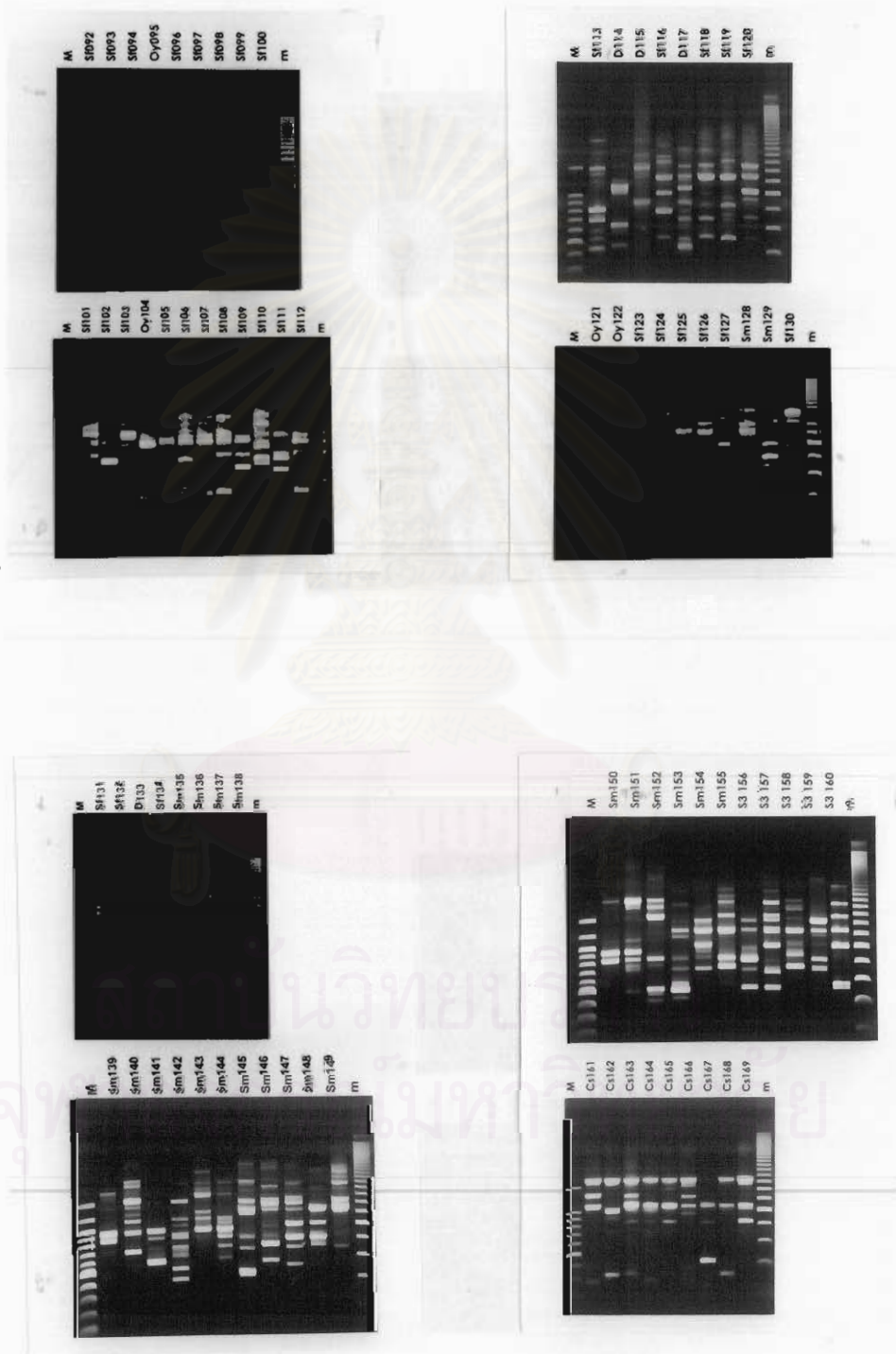


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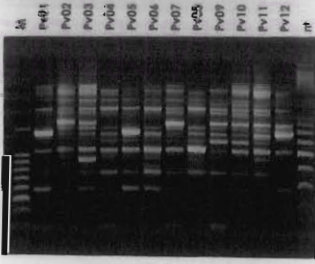
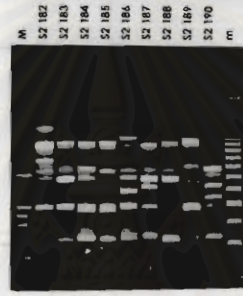
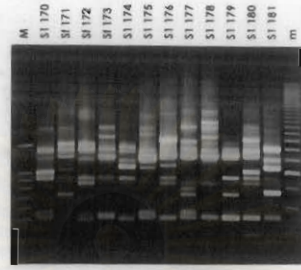
B.3 primer OPB08



B.3 primer OPB08 (continued)

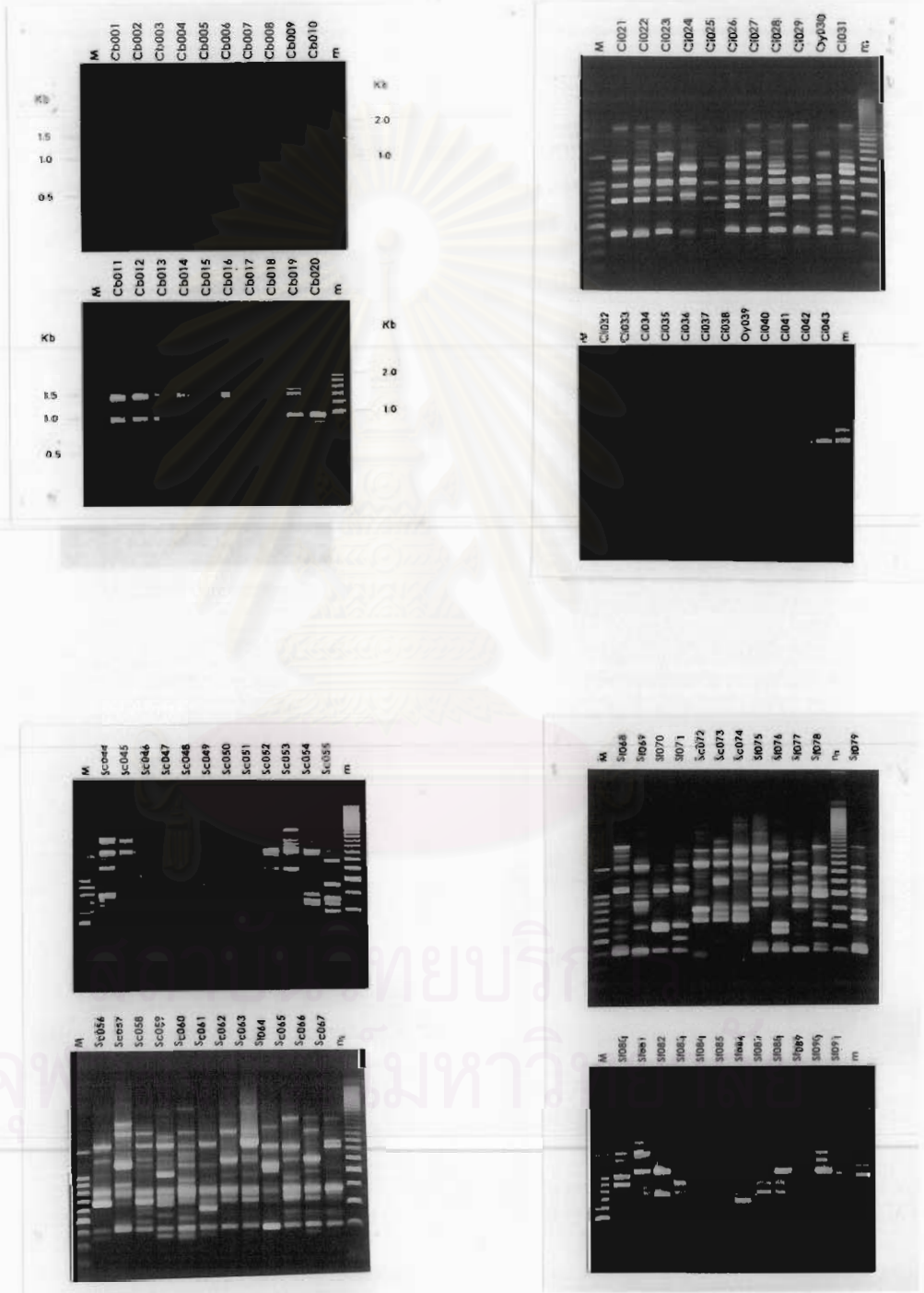


B.3 primer OPB08 (continued)

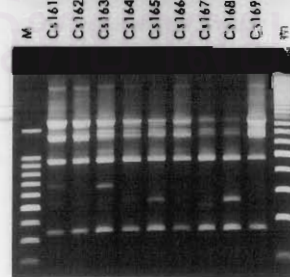
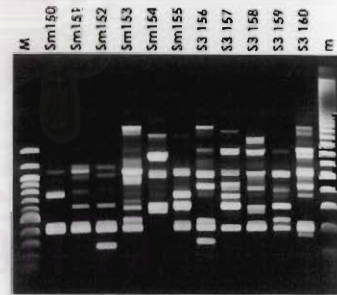
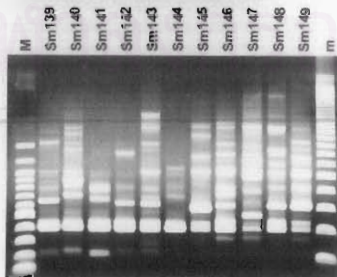
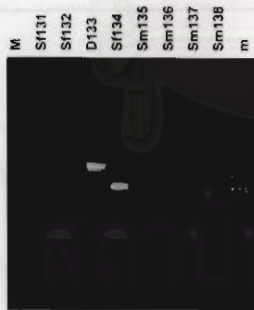
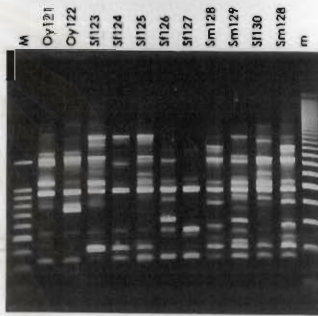
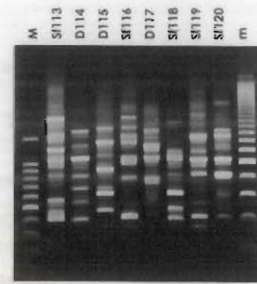
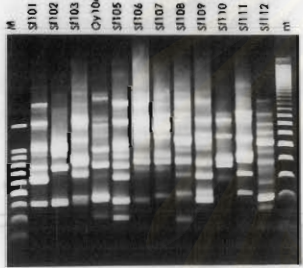
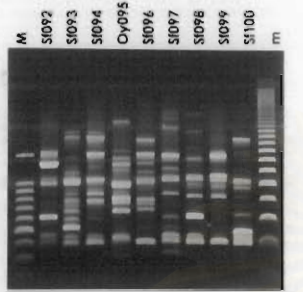


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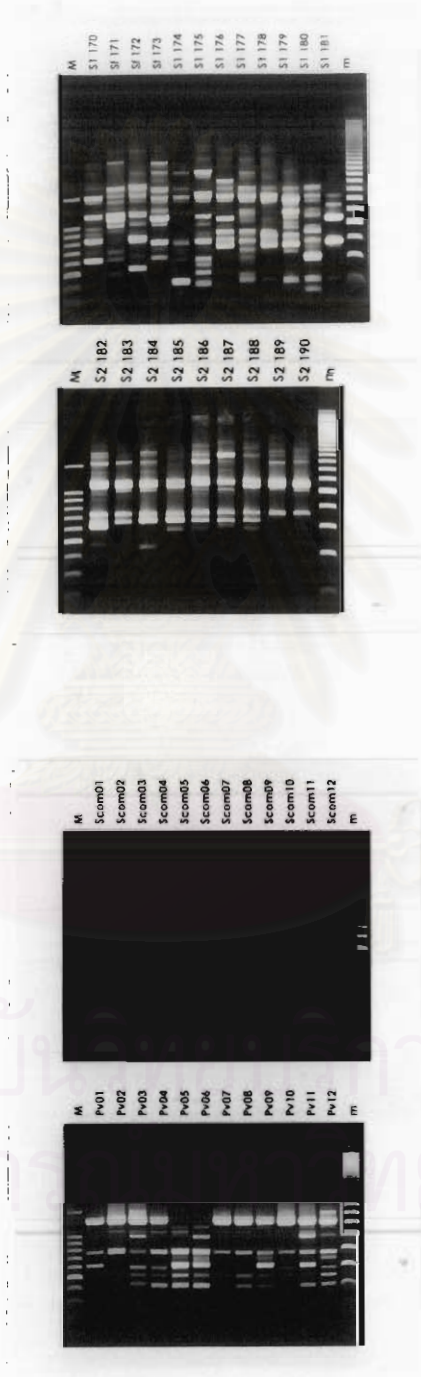
B.4 primer UBC210



B.4 primer UBC210 (continued)



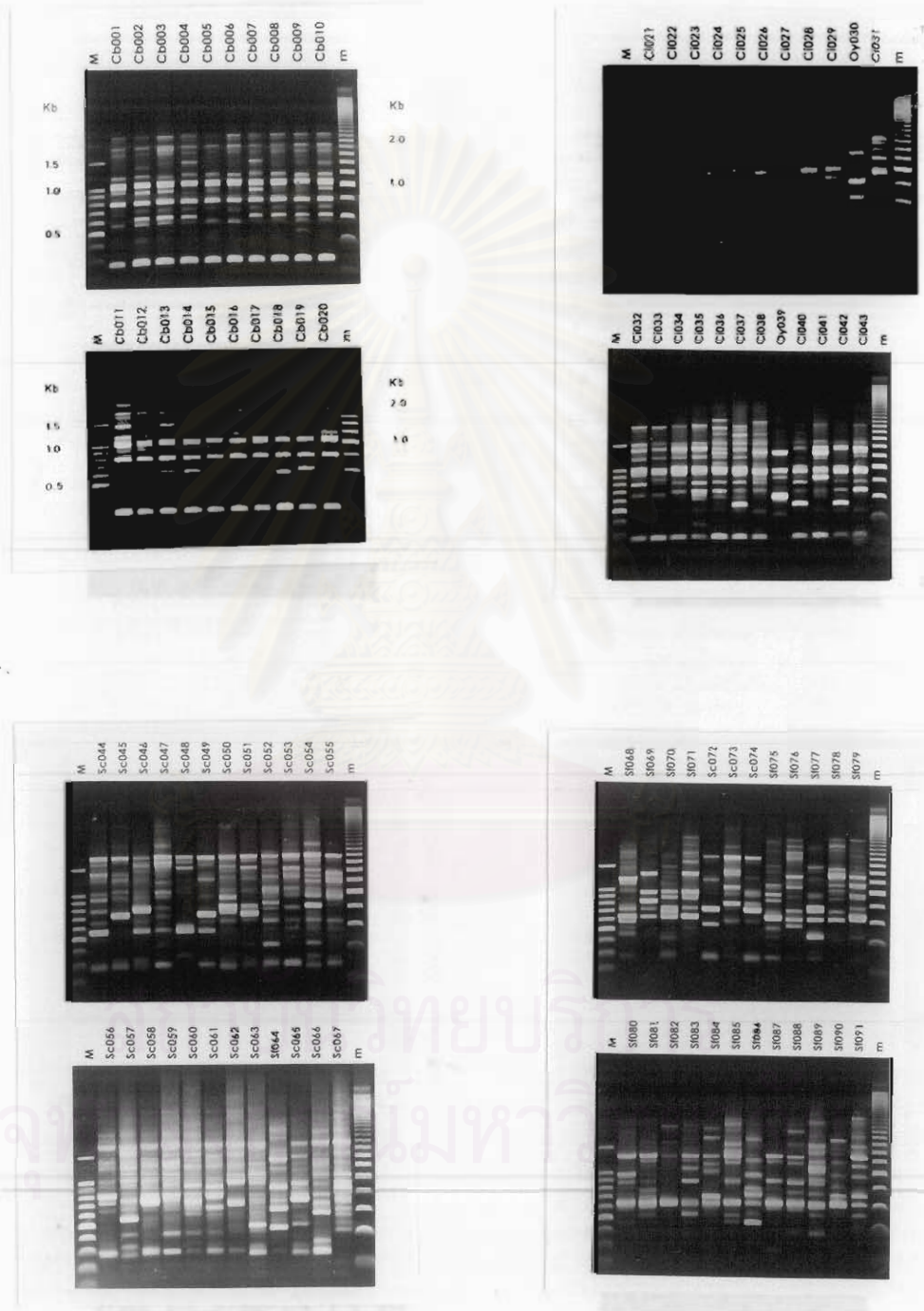
B.4 primer UBC210 (continued)



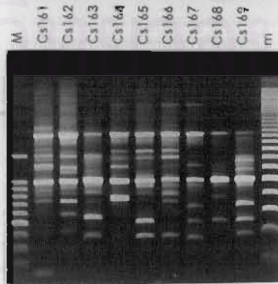
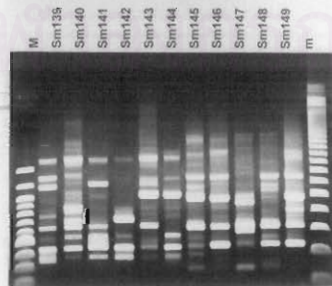
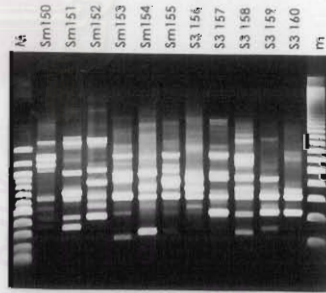
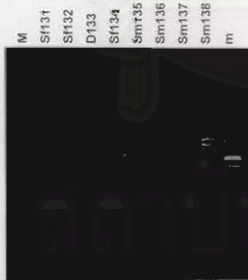
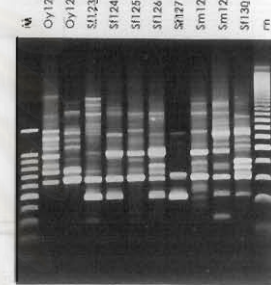
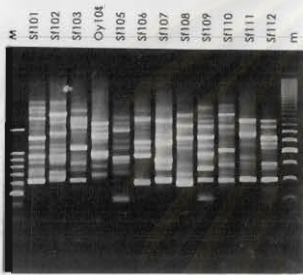
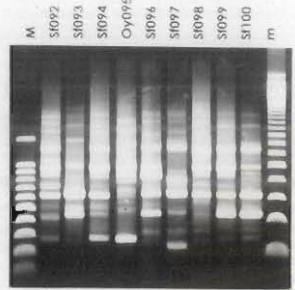
สถาบันจุฬาลงกรณ์มหาวิทยาลัย



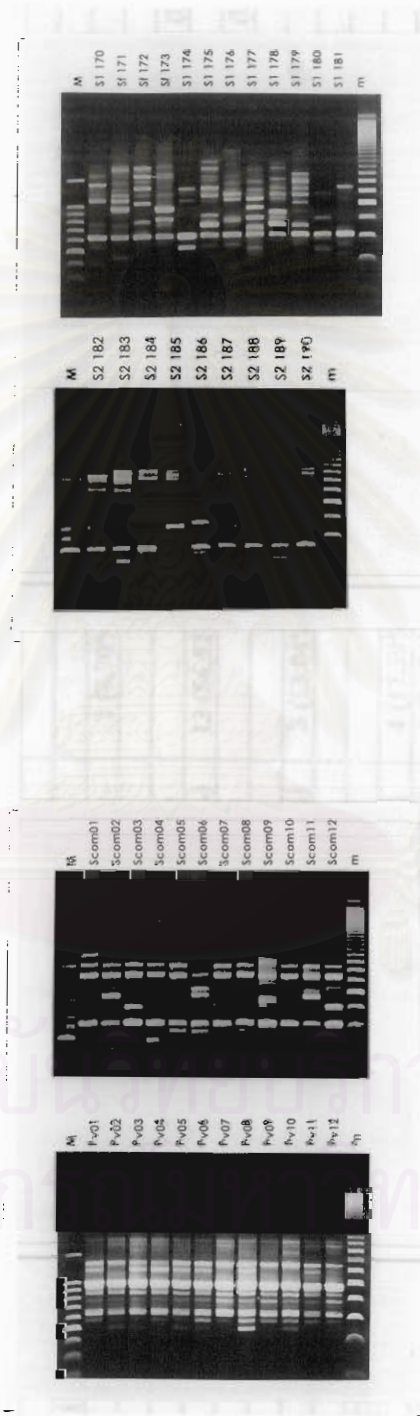
B.5 primer UBC220



B.5 primer UBC220 (continued)



B.5 primer UBC220 (continued)



Frequencies of each amplified RAPD band within each investigated species generated from primers OPA09 (C.1), OPB01 (C.2), OPB08 (C.3), UBC210 (C.4) and UBC220 (C.5)

C.1 Primer OPA09

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
1750			6 (66.67%)								
1700	18 (90%)			7 (26.92%)							
1600			2 (22.22%)							10 (83.33%)	
1550	20 (100%)	18 (90%)		3 (11.54%)	52 (89.66%)	21 (91.30%)	9 (100%)	9 (100%)	5 (100%)	12 (100%)	
1515	12 (60%)										
1490		12 (60%)	2 (22.22%)								
1450	2 (10%)				5 (8.62%)	2 (8.70%)					
1400			2 (22.22%)	10 (38.46%)				4 (44.44%)			12 (100%)
1350				12 (46.15%)	1 (1.72%)					1 (8.33%)	
1300				3 (11.54%)	48 (82.76%)	13 (56.52%)	9 (100%)	4 (44.44%)	3 (60%)		
1250	10 (50%)		3 (33.33%)	7 (26.92%)	4 (6.90%)					1 (8.33%)	
1225											12 (100%)
1215				4 (15.38%)	13 (22.41%)	3 (13.04%)	3 (33.33%)		1 (20%)		
1200	19 (95%)			8 (30.77%)				9 (100%)			
1150		20 (100%)									
1130				16 (61.54%)	8 (13.79%)	4 (17.39%)	1 (11.11%)		1 (20%)		
1100	20 (100%)	20 (100%)	1 (11.11%)		33 (56.90%)	5 (21.74%)	7 (77.78%)	8 (88.89%)		4 (33.33%)	
1050				6 (23.08%)		10 (43.48%)		4 (44.44%)		6 (50%)	
1010	6 (30%)	10 (50%)		1 (3.85%)	43 (74.14%)	6 (26.09%)	9 (100%)		4 (80%)	12 (100%)	
1000			9 (100%)			6 (26.09%)			3 (60%)		
985	10 (50%)							8 (88.89%)		7 (58.33%)	
955		16 (80%)		3 (11.54%)							
935			6 (66.67%)	22 (84.62%)	25 (43.10%)	2 (8.70%)					
900		4 (20%)			4 (6.90%)						
885	15 (75%)					1 (4.35%)		8 (88.89%)	1 (20%)		
850		12 (60%)	2 (22.22%)		8 (13.79%)	2 (8.70%)	3 (33.33%)		3 (60%)		2 (16.67%)

C.1 Primer OPA09 (continued)

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
835				8 (30.77%)	21 (36.21%)		5 (55.56%)			8 (66.67%)	
800		13 (65%)	2 (22.22%)	10 (38.46%)	25 (43.10%)	4 (17.39%)					
785	12 (60%)			1 (3.85%)	16 (27.59%)	8 (34.78%)	3 (33.33%)				
770		15 (75%)		9 (34.62%)				6 (66.67%)			
750	17 (85%)									3 (25%)	11 (91.67%)
735											12 (100%)
700		11 (55%)	2 (22.22%)	15 (57.69%)	25 (43.10%)	15 (65.22%)	1 (11.11%)		3 (60%)		
685								6 (66.67%)		7 (58.33%)	
670		1 (5%)	3 (33.33%)	15 (57.69%)	16 (27.59%)	2 (8.70%)	4 (44.44%)				
620	13 (65%)				18 (31.03%)	11 (47.83%)	7 (77.78%)		1 (20%)	12 (100%)	
600	7 (35%)		3 (33.33%)	4 (15.38%)	11 (18.97%)	3 (13.04%)					11 (91.67%)
580				11 (42.31%)							
575											12 (100%)
565								5 (55.56%)		2 (16.67%)	
550	12 (60%)			9 (34.62%)	10 (17.24%)						
525			9 (100%)	1 (3.85%)	31 (53.45%)	12 (52.17%)				5 (41.67%)	
500	11 (55%)	7 (35%)		26 (100%)							
490					8 (13.79%)	17 (73.91%)			5 (100%)		
450		5 (25%)	1 (11.11%)							1 (8.33%)	
435				2 (7.69%)	5 (8.62%)		1 (11.11%)				
420				18 (69.23%)						7 (58.33%)	
400	18 (90%)	5 (25%)	7 (77.78%)	1 (3.85%)	12 (20.69%)	7 (30.43%)	9 (100%)	4 (44.44%)	2 (40%)	4 (33.33%)	12 (100%)
380				4 (15.38%)	18 (31.03%)	11 (47.83%)	1 (11.11%)		3 (60%)	2 (16.67%)	
350				9 (34.62%)	14 (24.14%)	1 (4.35%)				4 (33.33%)	
300				2 (7.69%)	10 (17.24%)		4 (44.44%)			2 (16.67%)	
250	20 (100%)										
240			3 (33.33%)			2 (8.70%)			1 (20%)		
235			4 (44.44%)	4 (15.38%)	4 (6.90%)	3 (13.04%)				11 (91.67%)	
200				18 (69.23%)		12 (52.17%)				1 (8.33%)	

C.2 Primer OPB01

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
2100	20 (100%)										
2025			1 (11.11%)	1 (3.85%)	12 (26.69%)	1 (4.35%)				6 (50%)	
2000											12 (100%)
1825			7 (77.78%)	6 (23.08%)	8 (13.79%)	4 (17.39%)				2 (16.67%)	
1815											12 (100%)
1800		20 (100%)									
1700		14 (70%)	2 (22.22%)	5 (19.23%)	20 (34.48%)	2 (8.70%)	1 (11.11%)	7 (77.78%)		5 (41.67%)	
1600	20 (100%)	2 (10%)		13 (50%)	13 (22.41%)	2 (8.70%)		6 (66.67%)	2 (40%)	9 (75%)	9 (75%)
1550				13 (50%)	10 (17.24%)	3 (13.04%)	1 (11.11%)				
1520		17 (85%)	4 (44.44%)	1 (3.85%)	1 (1.72%)						
1500				9 (34.62%)	6 (10.34%)	4 (17.39%)	4 (44.44%)		2 (40%)		7 (58.33%)
1450	13 (65%)			3 (11.54%)	10 (17.24%)	1 (4.35%)			2 (40%)	2 (16.67%)	
1400	20 (100%)										
1390		15 (75%)		5 (19.23%)	2 (3.45%)			8 (88.89%)		1 (8.33%)	12 (100%)
1360		9 (45%)		8 (30.77%)	6 (10.34%)	6 (26.09%)		2 (22.22%)		3 (25%)	
1300			2 (22.22%)	9 (34.62%)	33 (56.90%)	4 (17.39%)		3 (33.33%)	3 (60%)	8 (66.67%)	
1250	20 (100%)										
1225			2 (22.22%)	10 (38.46%)	12 (20.69%)	1 (4.35%)	3 (33.33%)				
1200		15 (75%)		12 (46.15%)	18 (31.03%)	1 (4.35%)	9 (100%)	3 (33.33%)	2 (40%)		11 (91.67%)
1150		20 (100%)		4 (15.38%)	29 (50%)	1 (4.35%)	7 (77.78%)		2 (40%)	4 (33.33%)	
1050	20 (100%)	7 (35%)	6 (66.67%)	4 (15.38%)	13 (22.41%)	15 (65.22%)	2 (22.22%)			5 (41.67%)	2 (16.67%)

C.2 Primer OPB01 (continued)

	Cb (N=20)	Cl (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
1000			8 (88.89%)	4 (15.38%)	22 (37.93%)	16 (69.57%)		7 (77.78%)	4 (80%)		
990										9 (75%)	
980	17 (85%)			9 (34.62%)	12 (20.69%)	11 (47.83%)	2 (22.22%)		4 (80%)		
900		15 (75%)	8 (88.89%)	10 (38.46%)	22 (37.93%)	7 (30.43%)		8 (88.89%)		12 (100%)	
875											12 (100%)
835		18 (90%)	8 (88.89%)	3 (11.54%)	21 (36.21%)	5 (21.74%)		2 (22.22%)	2 (40%)		
800	7 (35%)	4 (20%)	1 (11.11%)	7 (26.92%)	41 (70.69%)	6 (26.09%)	8 (88.89%)	7 (77.78%)	2 (40%)	10 (83.33%)	
750	18 (90%)	3 (15%)	3 (33.33%)	3 (11.54%)	16 (27.59%)	18 (78.26%)		8 (88.89%)	1 (20%)	4 (33.33%)	6 (50%)
720			6 (66.67%)		16 (27.59%)	8 (34.78%)		4 (44.44%)	4 (80%)		
700		20 (100%)									
685			1 (11.11%)	10 (38.46%)	3 (5.17%)					1 (8.33%)	5 (41.67%)
670		1 (5%)		4 (15.38%)	8 (13.79%)	3 (13.04%)				1 (8.33%)	
650	20 (100%)										
620			2 (22.22%)	6 (23.08%)	12 (20.69%)	1 (4.35%)	6 (66.67%)	7 (77.78%)		2 (16.67%)	
585		11 (55%)		1 (3.85%)	6 (10.34%)	1 (4.35%)			3 (60%)		
560					2 (3.45%)	14 (60.87%)	2 (22.22%)				
530	7 (35%)	1 (5%)	1 (11.11%)		5 (8.62%)		2 (22.22%)				
500				2 (7.69%)	10 (17.24%)	1 (4.35%)		2 (22.22%)		2 (16.67%)	
480				17 (65.38%)	3 (5.17%)	6 (26.09%)	3 (33.33%)		1 (20%)	1 (8.33%)	
465											12 (100%)
380			1 (11.11%)	3 (11.54%)	9 (15.52%)	8 (34.78%)	3 (33.33%)		2 (40%)	12 (100%)	2 (16.67%)

C.3 Primer OPB08

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
2500											12 (100%)
2325								5 (55.56%)			
2300								9 (100%)			
2000					1 (1.72%)		1 (11.11%)				
1800					2 (3.45%)				1 (20%)		12 (100%)
1700	1 (5%)		8 (88.89%)			2 (8.70%)				7 (58.33%)	
1650	20 (100%)										
1625					8 (13.79%)	5 (21.74%)	2 (22.22%)	5 (55.56%)			
1600				2 (7.69%)	4 (6.90%)			9 (100%)		3 (25%)	
1580					6 (10.34%)						7 (58.33%)
1550	20 (100%)										
1525											10 (83.33%)
1500				9 (34.62%)	18 (31.03%)	11 (47.83%)	4 (44.44%)		2 (40%)	11 (91.67%)	
1475		2 (10%)	1 (11.11%)		6 (10.34%)			6 (66.67%)			
1400				18 (69.23%)	30 (51.72%)	9 (39.13%)	9 (100%)	2 (22.22%)	4 (80%)		12 (100%)
1350										11 (91.67%)	
1300			3 (33.33%)		15 (25.86%)	11 (47.83%)	7 (77.78%)	1 (11.11%)			
1275					4 (6.90%)						
1250		20 (100%)									
1225					12 (20.69%)		7 (77.78%)	2 (22.22%)			
1210				20 (76.92%)	41 (70.69%)	8 (34.78%)	3 (33.33%)	1 (11.11%)	5 (100%)	5 (41.67%)	
1200											8 (66.67%)
1180	15 (75%)										
1150	1 (5%)				5 (8.62%)						
1100	5 (25%)			9 (34.62%)	6 (10.34%)	9 (39.13%)	4 (44.44%)	1 (11.11%)			
1075										12 (100%)	
1050			8 (88.89%)	1 (3.85%)	7 (12.07%)						
1025			4 (44.44%)	3 (11.54%)	2 (3.45%)	4 (17.39%)					
1000				2 (7.69%)	19 (32.76%)	3 (13.04%)	2 (22.22%)	9 (100%)	2 (40%)		
950				1 (3.85%)	2 (3.45%)			3 (33.33%)			5 (41.67%)
925					9 (15.52%)	10 (43.48%)	5 (55.56%)				

C.3 Primer OPB08 (continued)

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	Si (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
900				1 (3.85%)	13 (22.41%)	1 (4.35%)			1 (20%)	9 (75%)	
875		1 (5%)			1 (1.72%)			8 (88.89%)			
850					5 (8.62%)	14 (60.87%)	7 (77.78%)		2 (40%)	3 (25%)	
835	20 (100%)										
825			6 (66.67%)								
815				22 (84.62%)	34 (58.62%)	1 (4.35%)	1 (11.11%)	2 (22.22%)		2 (16.67%)	
800		15 (75%)			1 (1.72%)	2 (8.70%)					
775				2 (7.69%)	17 (29.31%)	4 (17.39%)					
750				26 (100%)							
740					1 (1.72%)						12 (100%)
730		11 (55%)			3 (5.17%)	4 (17.39%)	4 (44.44%)				
710					28 (48.28%)	14 (60.87%)		9 (100%)	4 (80%)	6 (50%)	2 (16.67%)
700	20 (100%)										
675		20 (100%)									
635				1 (3.85%)		1 (4.35%)		8 (88.89%)	1 (20%)		
610					12 (20.69%)						
600	20 (100%)										
590				2 (7.69%)		1 (4.35%)					
580				1 (3.85%)	8 (13.79%)	4 (17.39%)					
550		7 (35%)		3 (11.54%)	3 (5.17%)	2 (8.70%)	3 (33.33%)	2 (22.22%)	1 (20%)	2 (16.67%)	7 (58.33%)
525					10 (17.24%)						
510					26 (44.83%)	8 (34.78%)	9 (100%)		4 (80%)		
500					2 (3.45%)					9 (75%)	
480				1 (3.85%)	2 (3.45%)						
450		20 (100%)									
435				1 (3.85%)	1 (1.72%)	4 (17.39%)	1 (11.11%)				
425					11 (18.97%)	3 (13.04%)					
410			1 (11.11%)		3 (5.17%)		8 (88.89%)				
375			2 (22.22%)								
325			5 (55.56%)								
280			3 (33.33%)						1 (20%)		11 (91.67%)

C.4 Primer UBC210

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
2000				19 (73.08%)				6 (66.67%)			
1800			9 (100%)	5 (19.23%)	3 (5.17%)	1 (4.35%)	1 (11.11%)	7 (77.78%)			
1630	17 (85%)				27 (46.55%)	10 (43.48%)	8 (88.89%)		1 (20%)	3 (25%)	
1600	1 (5%)			23 (88.46%)				7 (77.78%)			
1580	2 (10%)	9 (45%)									
1550										12 (100%)	
1520				3 (11.54%)	43 (74.14%)	3 (13.04%)	9 (100%)				
1450				8 (30.77%)	1 (1.72%)	2 (8.70%)			5 (100%)		
1415	20 (100%)	19 (95%)	9 (100%)								6 (50%)
1400					28 (48.28%)	7 (30.43%)	8 (88.89%)	3 (33.33%)	1 (20%)	10 (83.33%)	
1390			9 (100%)								
1350	2 (10%)	9 (45%)		8 (30.77%)	3 (5.17%)					3 (25%)	
1300		15 (75%)									
1250				8 (30.77%)	12 (20.69%)		2 (22.22%)				
1200				13 (50%)	22 (37.93%)	2 (8.70%)	4 (44.44%)	2 (22.22%)		4 (33.33%)	10 (83.33%)
1150	14 (70%)	3 (15%)			1 (1.72%)			7 (77.78%)			7 (58.33%)
1100				7 (26.92%)	27 (46.55%)	2 (8.70%)	3 (33.33%)			1 (8.33%)	
1050	15 (75%)			6 (23.08%)	38 (65.52%)	5 (21.47%)	2 (22.22%)	7 (77.78%)			7 (58.33%)
1000		11 (55%)		8 (30.77%)	1 (1.72%)	10 (43.48%)			4 (80%)		4 (33.33%)
985				1 (3.85%)	25 (43.10%)	1 (4.35%)	3 (33.33%)	1 (11.11%)		2 (16.67%)	
940	20 (100%)	20 (100%)	9 (100%)	8 (30.77%)	12 (20.69%)	10 (43.48%)	2 (22.22%)				

C.4 Primer UBC210 (continued)

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
910					17 (29.31%)	1 (4.35%)	5 (55.56%)				
880				6 (23.08%)	9 (15.52%)	1 (4.35%)			2 (40%)		
870	20 (100%)	17 (85%)									
830		11 (55%)		5 (19.23%)	18 (31.03%)	4 (17.39%)	3 (33.33%)				
800				19 (73.08%)	25 (43.10%)	15 (65.22%)	7 (77.78%)		4 (80%)	6 (50%)	
785											12 (100%)
745		20 (100%)									
735				16 (61.54%)	15 (25.86%)	7 (30.43%)	5 (55.56%)	9 (100%)	5 (100%)	4 (33.33%)	
710		5 (25%)			5 (8.62%)		3 (33.33%)				4 (33.33%)
690				22 (84.62%)							
680	20 (100%)	2 (10%)	2 (22.22%)		1 (1.72%)					6 (50%)	
650				6 (23.08%)	11 (18.97%)	4 (17.39%)		8 (88.89%)			
625		1 (5%)		1 (3.85%)	21 (36.21%)	13 (56.52%)	5 (55.56%)	2 (22.22%)		2 (16.67%)	
600				5 (19.23%)	10 (17.24%)	3 (13.04%)		4 (44.44%)	3 (60%)	12 (100%)	9 (75%)
540	9 (45%)	5 (25%)	9 (100%)		19 (32.76%)	3 (13.04%)	1 (11.11%)		1 (20%)		
500											12 (100%)
490			2 (22.22%)	6 (23.08%)	4 (6.90%)		1 (11.11%)			1 (8.33%)	
435				9 (34.62%)	25 (43.10%)	22 (95.65%)			4 (80%)	2 (16.67%)	
425		20 (100%)									
400	6 (30%)			13 (50%)	50 (86.21%)	22 (95.65%)	8 (88.89%)		5 (100%)	7 (58.33%)	12 (100%)
335	11 (55%)	1 (5%)	9 (100%)	14 (53.85%)	14 (24.14%)	8 (34.78%)	2 (22.22%)		2 (40%)		
300	13 (65%)	19 (95%)									
235						6 (26.09%)			1 (20%)	12 (100%)	

C.5 Primer UBC220

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
2300	18(90%)										
2100			9 (100%)								
1900	20 (100%)				4 (6.90%)						
1800				26 (100%)							
1700					23 (39.66%)	13 (56.52%)	6 (66.67%)	9 (100%)	1 (20%)		
1600			6 (66.67%)	11 (42.31%)	7 (12.07%)	4 (17.39%)	5 (55.56%)	6 (66.67%)			
1580					11 (18.97%)						
1500		20 (100%)	3 (33.33%)	11 (42.31%)	5 (8.62%)					12 (100%)	
1480	6 (30%)				19 (32.76%)	3 (13.04%)	4 (44.44%)	7 (77.78%)			
1420					17 (29.31%)	6 (62.09%)	4 (44.44%)				
1400		19 (95%)	6 (66.67%)	9 (34.62%)	15 (25.86%)			9 (100%)			
1380		7 (35%)	1 (11.11%)		7 (12.07%)	2 (8.70%)					
1325											12 (100%)
1300				2 (7.69%)	26 (44.83%)	8 (34.78%)			2 (40%)	12 (100%)	
1280				17 (65.38%)	13 (22.41%)	1 (4.35%)	4 (44.44%)	6 (66.67%)			
1220				17 (65.38%)		2 (8.70%)	4 (44.44%)		1 (20%)	11 (91.67%)	
1200	20 (100%)	20 (100%)	8 (88.89%)	1 (3.85%)	14 (24.14%)			9 (100%)			
1180			5 (55.56%)		16 (27.59%)	6 (26.09%)	8 (88.89%)		1 (20%)		7 (58.33%)
1100				10 (38.46%)	28 (48.28%)	6 (26.09%)	8 (88.89%)	9 (100%)		10 (83.33%)	
1050	20 (100%)										
1025	20 (100%)			20 (76.92%)	9 (15.52%)	3 (13.04%)	1 (11.11%)	5 (55.56%)			
1000			9(100%)		1 (1.72%)	4 (17.39%)				1 (8.33%)	
980		20 (100%)		1 (3.85%)	25 (43.10%)	12 (52.17%)	1 (11.11%)		2 (40%)	4 (33.33%)	12 (100%)
960				22 (84.62%)	33 (56.90%)	4 (17.39%)	2 (22.22%)				

C.5 Primer UBC220 (continued)

	Cb (N=20)	Ci (N=20)	Cs (N=9)	Sc (N=26)	Sf (N=58)	Sm (N=23)	S1 (N=9)	S2 (N=9)	S3 (N=5)	Scom (N=12)	Pevi (N=12)
950	18 (90%)	17 (85%)									
920	5 (25%)		7 (77.78%)				2 (22.22%)	4 (44.44%)			12 (100%)
900					18 (31.03%)	1 (4.35%)				1 (8.33%)	
880					13 (22.41%)			6 (66.67%)			
860		9 (45%)	3 (33.33%)		8 (13.80%)	3 (13.04%)	1 (11.11%)		2 (20%)	1 (8.33%)	12 (100%)
835			4 (44.44%)	4 (15.38%)	10 (17.24%)	8 (34.78%)	5 (55.56%)		2 (20%)	6 (50%)	
800				18 (69.23%)	7 (12.07%)	4 (17.39%)		1 (11.11%)		4 (33.33%)	
790	20 (100%)	20 (100%)			4 (6.90%)	3 (13.04%)	3 (33.33%)				12 (100%)
750			2 (22.22%)		12 (20.69%)	4 (17.39%)	3 (33.33%)			3 (25%)	
735			5 (55.56%)	15 (57.69%)	11 (18.97%)	3 (13.04%)	5 (55.56%)	6 (66.67%)			
720	19 (95%)			2 (7.69%)	19 (32.76%)			6 (66.67%)			
700				5 (19.23%)	15 (25.86%)			6 (66.67%)			
690	2 (10%)	16 (80%)			4 (6.90%)	5 (21.74%)	2 (22.22%)	2 (22.22%)	3 (60%)		
650		13 (65%)	2 (22.22%)		1 (1.72%)			2 (22.22%)			12 (100%)
620	11 (55%)	15 (75%)		18 (69.23%)	57 (98.28%)	20 (86.96%)	9 (100%)		5 (100%)	12 (100%)	12 (100%)
580	20 (100%)		1 (11.11%)	5 (19.23%)	6 (10.34%)	2 (8.70%)		9 (100%)			12 (100%)
560		3 (15%)	1 (11.11%)	16 (61.54%)	1 (1.72%)					3 (25%)	
525					19 (32.76%)	12 (52.17%)	7 (77.78%)	9 (100%)	2 (40%)	3 (25%)	
500		18 (90%)	4 (44.44%)	1 (3.85%)			2 (22.22%)				6 (50%)
480					4 (6.90%)	3 (13.04%)	2 (22.22%)			2 (16.67%)	
460				4 (15.38%)	19 (32.76%)	2 (8.70%)	2 (22.22%)	9 (100%)			
435				19 (73.08%)	8 (31.03%)	15 (65.22%)			4 (80%)	1 (8.33%)	
400					1 (1.72%)	3 (33.33%)	3 (33.33%)	9 (100%)		2 (16.67%)	
390			4 (44.44%)								
350				3 (11.54%)		9 (39.13%)					
310				9 (34.62%)	1 (1.72%)	2 (8.70%)			1 (20%)		
280	20 (100%)	20 (100%)		21 (80.77%)	3 (5.17%)	5 (21.74%)		9 (100%)	1 (20%)		

Appendix D

Pairwise comparisons of inter - and intraspecific similarity indices (above diagonal) and genetic distances (below diagonal) using primers OPA09 (D.1), OPB01 (D.2), OPB08 (D.3), UBC210 (D.4) and UBC220 (D.5)



สถาบันวิทยบริการ
ศาลากลางกรมมหาวิทยาลัย

D.1 Primer OPA09

	ChSR	ChSK	ChRN	ChKB	ChCB	ChPJ	ChSK	ChPN	ChKB	ChCB	ChPJ	ChSK	ChPN	ChKB	ChTD	ChRN	ChPK	ChCT	SICT	SISR
ChSR	-	0.8452	0.7311	0.6369	0.2628	0.2502	0.3292	0.3244	0.2262	0.1779	0.2276	0.2244	0.2594	0.2975	0.3407					
ChSK	0.1548	-	0.7143	0.6369	0.2657	0.2540	0.3508	0.3245	0.2093	0.2122	0.2415	0.2238	0.2716	0.2825	0.3290					
ChRN	0.2689	0.2857	-	0.7558	0.2892	0.2818	0.3279	0.3268	0.2612	0.1387	0.1669	0.1608	0.2234	0.2736	0.3721					
ChKB	0.3631	0.3631	0.2442	-	0.3727	0.3556	0.3647	0.3877	0.2598	0.1386	0.1656	0.1585	0.2133	0.3564	0.4715					
ChCB	0.7372	0.7343	0.7108	0.6273	-	0.7993	0.6726	0.7435	0.1893	0.2022	0.2316	0.2009	0.2374	0.3960	0.4672					
ChPJ	0.7498	0.7460	0.7182	0.6444	0.2007	-	0.6774	0.7114	0.1901	0.1850	0.2150	0.2049	0.2423	0.3805	0.4114					
ChSK	0.6708	0.6492	0.6721	0.6353	0.3274	0.3226	-	0.6652	0.0207	0.2662	0.2557	0.2383	0.2685	0.3240	0.3882					
ChPN	0.6756	0.6755	0.6732	0.6123	0.2565	0.2886	0.3348	-	0.2413	0.2139	0.2247	0.2131	0.2641	0.3507	0.4687					
ChKB	0.7738	0.7907	0.7388	0.7402	0.8107	0.8099	0.7923	0.7587	-	0.2292	0.2253	0.2344	0.2244	0.2706	0.2517					
ChTD	0.8221	0.7878	0.8613	0.8614	0.7978	0.8150	0.7338	0.7861	0.7708	-	0.6030	0.5156	0.4294	0.2180	0.2410					
ChRN	0.7724	0.7585	0.8331	0.8344	0.7684	0.7850	0.7443	0.7753	0.7747	0.3970	-	0.6157	0.4804	0.2229	0.2369					
ChPK	0.7756	0.7762	0.8392	0.8415	0.7991	0.7951	0.7617	0.7869	0.7656	0.4844	0.3843	-	0.5184	0.2445	0.2390					
ChCT	0.7406	0.7284	0.7766	0.7867	0.7626	0.7577	0.7315	0.7359	0.7756	0.5706	0.5196	0.4816	-	0.3006	0.2863					
SICT	0.7025	0.7175	0.7264	0.6436	0.6040	0.6195	0.6760	0.6493	0.7294	0.7820	0.7771	0.7555	0.6994	-	0.5606					
SFSR	0.6593	0.6710	0.6279	0.5285	0.5328	0.5886	0.6118	0.5313	0.7483	0.7590	0.7631	0.7610	0.7137	0.4394	-					
SICBA	0.7116	0.7132	0.6912	0.6303	0.5232	0.5594	0.6098	0.5866	0.6869	0.8211	0.7775	0.7603	0.7165	0.4323	0.4507					
SIPJ	0.7631	0.7612	0.7627	0.6880	0.6066	0.6060	0.6871	0.6624	0.6794	0.7772	0.7096	0.7694	0.6415	0.3921	0.4637					
SISK	0.7354	0.7534	0.7192	0.6359	0.5848	0.5747	0.6368	0.6177	0.7448	0.7562	0.7337	0.7158	0.6803	0.4407	0.4180					
SIST	0.6905	0.6846	0.6925	0.6403	0.6205	0.5701	0.6070	0.6347	0.7045	0.7344	0.7223	0.7035	0.7044	0.5489	0.5206					
SIRN	0.7581	0.7618	0.7597	0.7204	0.6929	0.6809	0.6969	0.7029	0.6786	0.7455	0.7365	0.7131	0.6990	0.5251	0.5696					
SICBS	0.6070	0.6663	0.6882	0.6264	0.6459	0.6859	0.7218	0.6650	0.7667	0.8299	0.7850	0.7594	0.7307	0.4549	0.4565					
SmpPK	0.6723	0.7038	0.6904	0.6647	0.5965	0.6202	0.6600	0.6293	0.7141	0.7772	0.7191	0.6694	0.6501	0.4910	0.4894					
SmrRN	0.7229	0.7296	0.7432	0.7350	0.6800	0.7212	0.7618	0.7391	0.7680	0.5481	0.8216	0.7553	0.6830	0.6901	0.6605					
SmsSS	0.7279	0.7361	0.7552	0.7154	0.7282	0.7263	0.7570	0.7572	0.6701	0.5407	0.8562	0.8677	0.8755	0.7634	0.4869					
SISR	0.5796	0.6014	0.6219	0.5543	0.6040	0.6402	0.6357	0.5657	0.7690	0.4849	0.8094	0.8383	0.8404	0.7589	0.4416					
S2RN	0.5336	0.6237	0.4547	0.5517	0.6267	0.6470	0.6266	0.6620	0.8263	0.6943	0.7873	0.8207	0.8302	0.7872	0.6863					
S3SS	0.7154	0.7204	0.7190	0.6422	0.5971	0.6507	0.7039	0.6487	0.7336	0.5152	0.8662	0.8328	0.8322	0.7595	0.5580					
Scorn	0.6642	0.6475	0.6811	0.6288	0.7128	0.7225	0.7481	0.7126	0.7589	0.6433	0.7616	0.8182	0.8055	0.7854	0.5965					
Pevi	0.7828	0.8417	0.7586	0.7760	0.8720	0.8708	0.8273	0.8033	0.7200	0.8097	0.8888	0.8432	0.8134	0.8238	0.8710					

D.1 Primer OPA09 (continued)

	SICBA	SIPJ	SFSK	SFST	SIRN	SICBS	SmpPK	SmRN	SmSS	SISR	S2RN	S3SS	Scom	Pevi
CbSR	0.2884	0.2369	0.2646	0.3095	0.3419	0.3930	0.3277	0.2771	0.2721	0.4204	0.4664	0.2846	0.3358	0.3172
CbSK	0.2868	0.2388	0.2466	0.3154	0.2382	0.3337	0.2962	0.2704	0.2639	0.3986	0.4763	0.2796	0.3525	0.1583
CbRN	0.3088	0.2373	0.2808	0.3075	0.2403	0.3118	0.3096	0.2568	0.2448	0.3781	0.5453	0.2810	0.3189	0.2414
CbKB	0.3697	0.3120	0.3641	0.3597	0.3796	0.3736	0.3353	0.2650	0.2846	0.4457	0.4483	0.3578	0.3712	0.2240
CICB	0.4768	0.3934	0.4152	0.3795	0.3071	0.3541	0.4035	0.3200	0.2718	0.3960	0.3733	0.4029	0.2872	0.1280
CIPJ	0.4406	0.3940	0.4253	0.4299	0.3191	0.3141	0.3798	0.2788	0.2737	0.3598	0.3530	0.3493	0.2775	0.1292
CISK	0.3902	0.3129	0.3632	0.3930	0.3031	0.2782	0.3400	0.2382	0.2430	0.3643	0.3744	0.2961	0.2519	0.1727
CIPN	0.4134	0.3376	0.3823	0.3653	0.2971	0.3350	0.3707	0.2609	0.2428	0.4343	0.3380	0.3513	0.2874	0.1967
CcKB	0.3131	0.3206	0.2552	0.2955	0.3214	0.2333	0.2859	0.2320	0.3299	0.2310	0.1737	0.2664	0.2411	0.2800
ScTD	0.1789	0.2228	0.2438	0.2656	0.2545	0.1701	0.2228	0.4519	0.4593	0.5151	0.3057	0.4848	0.3567	0.1903
ScRN	0.2225	0.2904	0.2663	0.2777	0.2635	0.2150	0.2809	0.1784	0.1438	0.1906	0.2127	0.1338	0.2384	0.1112
ScPK	0.2397	0.3206	0.2842	0.2965	0.2869	0.2406	0.3306	0.2447	0.1323	0.1617	0.1793	0.1672	0.1818	0.1568
ScCT	0.2835	0.3585	0.3197	0.2956	0.3010	0.2693	0.3499	0.3170	0.1245	0.1596	0.1698	0.1678	0.1945	0.1866
SICT	0.5677	0.6079	0.5593	0.4511	0.4749	0.5451	0.5090	0.3099	0.2366	0.2411	0.2128	0.2405	0.2146	0.1762
SISR	0.5493	0.5363	0.5820	0.4800	0.4804	0.5435	0.5106	0.3395	0.5131	0.5584	0.3137	0.4420	0.4035	0.1290
SICBA	-	0.6335	0.5691	0.4254	0.4588	0.4773	0.5405	0.3304	0.4282	0.6743	0.3883	0.4881	0.3975	0.1971
SIPJ	0.3665	-	0.6164	0.4938	0.4774	0.5022	0.5806	0.3925	0.4965	0.5268	0.3275	0.4761	0.3973	0.1586
SISK	0.4309	0.3836	-	0.5267	0.4587	0.5184	0.5760	0.3690	0.5407	0.4935	0.2923	0.4765	0.3585	0.1171
SFST	0.5746	0.5062	0.4733	-	0.4731	0.3862	0.4836	0.3533	0.4964	0.5419	0.3202	0.5342	0.3402	0.1773
SIRN	0.5412	0.5226	0.5413	0.5269	-	0.3935	0.4423	0.2794	0.3348	0.4507	0.3165	0.3347	0.3222	0.1670
SICBS	0.5227	0.4978	0.4816	0.6138	0.6065	-	0.5083	0.2417	0.3298	0.4200	0.2506	0.2704	0.3377	0.1663
SmpPK	0.4595	0.4194	0.4240	0.5164	0.5573	0.4917	-	0.3570	0.4914	0.5896	0.2894	0.4928	0.3980	0.2022
SmRN	0.6696	0.6075	0.6310	0.6467	0.7206	0.7583	0.6430	-	0.4434	0.3232	0.2718	0.5023	0.4692	0.2351
SmSS	0.5718	0.5035	0.4593	0.5036	0.6652	0.6702	0.5086	0.5566	-	0.4731	0.3120	0.2999	0.3552	0.2190
SISR	0.3257	0.4732	0.5065	0.4581	0.5493	0.5780	0.4104	0.6768	0.5269	-	0.3789	0.4791	0.3324	0.1692
S2RN	0.6113	0.6725	0.7077	0.6798	0.6835	0.7494	0.7106	0.7282	0.6880	0.6211	-	0.5646	0.3558	0.1431
S3SS	0.5119	0.5239	0.5235	0.4658	0.6653	0.7296	0.5072	0.4977	0.7001	0.5209	0.4354	-	0.3364	0.1860
Scom	0.6025	0.6027	0.6415	0.6598	0.6678	0.6623	0.6020	0.5308	0.6448	0.6676	0.6442	0.6636	-	0.1400
Pevi	0.8029	0.8414	0.8829	0.8227	0.8330	0.8337	0.7978	0.7649	0.7810	0.8308	0.8569	0.8140	0.8600	-

D.2 Primer OPB01

	CbSR	CbSK	CbRN	CbKB	CiCB	CiPJ	CiSK	CiPN	CsKB	SeTD	SeRN	SePK	SeCT	SfCT	SfSR
CbSR	-	0.9062	0.8997	0.9077	0.1405	0.1813	0.1168	0.2111	0.2416	0.2445	0.2764	0.1674	0.2694	0.2347	0.2344
CbSK	0.0938	-	0.9236	0.9245	0.1430	0.1833	0.1189	0.2027	0.2485	0.2388	0.2680	0.1694	0.2664	0.2249	0.1891
CbRN	0.1003	0.0764	-	0.9203	0.1454	0.1756	0.1211	0.1951	0.2515	0.2350	0.2518	0.1699	0.2602	0.2129	0.1655
CbKB	0.0923	0.0755	0.0797	-	0.1452	0.1893	0.1209	0.2044	0.2510	0.2549	0.2925	0.1694	0.2680	0.2397	0.1928
CiCB	0.8595	0.8570	0.8546	0.8548	-	0.8124	0.8414	0.7661	0.2863	0.2971	0.3505	0.3051	0.2823	0.3096	0.3066
CiPJ	0.8187	0.8167	0.8244	0.8107	0.1876	-	0.7962	0.7701	0.2852	0.3056	0.3785	0.2848	0.3163	0.3136	0.3353
CiSK	0.8832	0.8811	0.8789	0.8791	0.1586	0.2038	-	0.7637	0.2581	0.2723	0.3382	0.2996	0.2507	0.3034	0.3020
CiPN	0.7889	0.7973	0.8049	0.7956	0.2339	0.2299	0.2363	-	0.2626	0.2660	0.3224	0.2616	0.2876	0.2891	0.3185
CsKB	0.7584	0.7515	0.7485	0.7490	0.7137	0.7148	0.7419	0.7374	-	0.3015	0.2738	0.3044	0.2237	0.3809	0.1844
SeTD	0.7555	0.7612	0.7650	0.7451	0.7029	0.6944	0.7277	0.7340	0.6985	-	0.4386	0.3961	0.4068	0.3271	0.3640
SeRN	0.7236	0.7320	0.7482	0.7075	0.6495	0.6215	0.6618	0.6776	0.7262	0.5614	-	0.3554	0.3353	0.3542	0.3902
SePK	0.8326	0.8306	0.8301	0.8306	0.6949	0.7152	0.7004	0.7384	0.6956	0.3961	0.6446	-	0.3773	0.2982	0.3530
SeCT	0.7306	0.7336	0.7398	0.7320	0.7177	0.6837	0.7493	0.7124	0.7763	0.5932	0.6647	0.6227	-	0.3095	0.3393
SfCT	0.7653	0.7751	0.7871	0.7603	0.6904	0.6864	0.6966	0.7109	0.6191	0.6730	0.6458	0.7018	0.6905	-	0.3513
SfSR	0.7656	0.8109	0.8345	0.8072	0.6934	0.6647	0.6980	0.6815	0.8156	0.6360	0.6098	0.6470	0.6607	0.6487	-
SfCBA	0.7274	0.7399	0.7675	0.7176	0.8082	0.7532	0.8070	0.7878	0.6246	0.7308	0.6216	0.7286	0.7015	0.5722	0.6363
SfPJ	0.7704	0.7722	0.7894	0.7546	0.6427	0.6189	0.6417	0.6615	0.6545	0.7134	0.6395	0.6466	0.6458	0.5735	0.5529
SfSK	0.6978	0.7050	0.7275	0.6805	0.7683	0.7107	0.7738	0.7251	0.6444	0.7103	0.5699	0.7179	0.6979	0.6146	0.7116
SfST	0.7691	0.7862	0.8042	0.7790	0.7282	0.6951	0.7312	0.7084	0.6260	0.6301	0.6840	0.7022	0.6792	0.5757	0.5975
SfRN	0.7583	0.7701	0.7903	0.7779	0.7193	0.6964	0.7220	0.6936	0.6423	0.6815	0.6890	0.7187	0.6839	0.5808	0.6161
SfCBS	0.6984	0.7031	0.7253	0.7189	0.6981	0.6526	0.7301	0.6823	0.6269	0.6568	0.5886	0.7504	0.6610	0.6652	0.6059
SmPK	0.6951	0.6870	0.6977	0.6657	0.7834	0.7165	0.8021	0.7280	0.5358	0.6860	0.6170	0.7541	0.7108	0.6215	0.7463
SmRN	0.6048	0.5874	0.5922	0.5607	0.8216	0.7716	0.8342	0.7618	0.6336	0.4689	0.7066	0.6845	0.7800	0.7437	0.7155
SmSS	0.7272	0.7211	0.7244	0.7092	0.8237	0.8113	0.8337	0.7944	0.5616	0.6001	0.6363	0.6791	0.7254	0.7058	0.6581
S1SR	0.7744	0.8037	0.8275	0.7906	0.6823	0.6596	0.6897	0.6658	0.8011	0.7107	0.5719	0.5814	0.6874	0.7041	0.6568
S2RN	0.7210	0.7648	0.7299	0.7237	0.6229	0.5608	0.6407	0.6598	0.6524	0.5662	0.6690	0.6078	0.7336	0.6320	0.6111
S3SS	0.7070	0.7177	0.7357	0.7034	0.7695	0.7759	0.7830	0.7636	0.6497	0.6176	0.6480	0.6604	0.7467	0.6821	0.5887
Scom	0.7079	0.7146	0.7329	0.7097	0.7055	0.6568	0.7356	0.7067	0.6659	0.6356	0.6374	0.6871	0.7455	0.6398	0.6375
Pevl	0.7707	0.7559	0.7516	0.7519	0.6643	0.6571	0.6792	0.6944	0.8475	0.8154	0.7200	0.7201	0.7616	0.6990	0.8043

D.2 Primer OPB01 (continued)

	SICBA	SIPJ	SISK	SIST	SIRN	SICBS	SmpPK	SmRN	SmSS	SISR	S2RN	S3SS	Scom	Pevi
ChSR	0.2726	0.2296	0.3022	0.2309	0.2417	0.3016	0.3049	0.3952	0.2728	0.2256	0.2790	0.2930	0.2921	0.2293
ChSK	0.2601	0.2278	0.2950	0.2138	0.2299	0.2969	0.3130	0.4126	0.2789	0.1963	0.2852	0.2823	0.2854	0.2441
ChRN	0.2325	0.2106	0.2725	0.1958	0.2097	0.2747	0.3023	0.4078	0.2756	0.1725	0.2701	0.2643	0.2671	0.2484
ChKB	0.2824	0.2460	0.3195	0.3210	0.2221	0.2811	0.3340	0.4393	0.2908	0.2094	0.2963	0.2966	0.2903	0.2481
CICB	0.1918	0.3573	0.2317	0.2718	0.2807	0.3019	0.2166	0.1784	0.1763	0.3177	0.3771	0.2305	0.2945	0.3357
CIPJ	0.2468	0.3811	0.2893	0.3049	0.3036	0.3474	0.2835	0.2284	0.1887	0.3404	0.4392	0.2241	0.3432	0.3429
CISK	0.1930	0.3583	0.2262	0.2688	0.2780	0.2699	0.1979	0.1658	0.1663	0.3103	0.3593	0.2170	0.3694	0.3208
CIPN	0.2122	0.3385	0.2749	0.2916	0.3064	0.3177	0.2720	0.2382	0.2056	0.3342	0.3402	0.2364	0.2933	0.3056
CsKB	0.3754	0.3455	0.3556	0.3740	0.3577	0.3731	0.4642	0.3664	0.4384	0.1989	0.4376	0.3503	0.3341	0.1525
ScTD	0.2692	0.2866	0.2897	0.3699	0.3185	0.3432	0.3140	0.5311	0.3999	0.2893	0.4338	0.3824	0.3644	0.1846
ScRN	0.3784	0.3605	0.4301	0.3160	0.3110	0.4114	0.3830	0.2934	0.3637	0.4281	0.3310	0.3520	0.3626	0.2800
ScPK	0.2714	0.3534	0.2821	0.2978	0.2813	0.2496	0.2459	0.3155	0.3209	0.4186	0.3922	0.3396	0.3129	0.2799
ScCT	0.2985	0.3542	0.3021	0.3208	0.3161	0.3390	0.2892	0.2200	0.2746	0.3126	0.2664	0.2533	0.2545	0.2384
SICT	0.4278	0.4265	0.3854	0.4243	0.4192	0.3348	0.3785	0.2563	0.2942	0.2959	0.3680	0.3179	0.3602	0.3010
SISR	0.3637	0.4471	0.2884	0.4025	0.3839	0.3941	0.2537	0.2845	0.3419	0.3432	0.3889	0.4113	0.3625	0.1957
SICBA	-	0.4340	0.4700	0.3983	0.4015	0.3720	0.4176	0.2319	0.1953	0.6633	0.3513	0.3371	0.2729	0.2725
SIPJ	0.5660	-	0.4258	0.4138	0.4607	0.3333	0.3909	0.3405	0.3859	0.3227	0.4902	0.4145	0.3865	0.1879
SISK	0.5300	0.5742	-	0.3751	0.3807	0.3846	0.4403	0.3324	0.2941	0.3481	0.4258	0.3437	0.3968	0.1668
SIST	0.6017	0.5862	0.6249	-	0.6030	0.3773	0.3219	0.3817	0.3245	0.2941	0.4066	0.3105	0.4074	0.1754
SIRN	0.5985	0.5393	0.6193	0.3970	-	0.4061	0.3462	0.2412	0.3493	0.4251	0.4221	0.3878	0.4552	0.1826
SICBS	0.6280	0.6667	0.6154	0.6227	0.5939	-	0.4087	0.2508	0.3526	0.3967	0.4025	0.4252	0.4488	0.1632
SmpPK	0.6824	0.6091	0.5597	0.6781	0.6538	0.5913	-	0.3472	0.3579	0.4263	0.4545	0.3727	0.3940	0.2540
SmRN	0.7681	0.6595	0.6676	0.6183	0.7588	0.7492	0.6528	-	0.3966	0.2770	0.3505	0.3539	0.3175	0.2743
SmSS	0.8047	0.6141	0.7059	0.6755	0.6507	0.6474	0.6421	0.6034	-	0.2714	0.3697	0.3592	0.4415	0.3339
SISR	0.3367	0.6773	0.6519	0.7059	0.5749	0.6033	0.5737	0.7230	0.7286	-	0.3299	0.3621	0.2865	0.2304
S2RN	0.6487	0.5098	0.5742	0.5934	0.5779	0.5975	0.5455	0.6495	0.6303	0.6701	-	0.4233	0.3280	0.1913
S3SS	0.6629	0.5855	0.6563	0.6895	0.6122	0.5748	0.6273	0.6461	0.6408	0.6379	0.5767	-	0.3090	0.2328
Scom	0.7271	0.6135	0.6032	0.5926	0.5448	0.5512	0.6060	0.6825	0.5585	0.7135	0.6720	0.6910	-	0.2136
Pevi	0.7275	0.8121	0.8332	0.8246	0.8174	0.8368	0.7460	0.7257	0.6661	0.7696	0.8087	0.7672	0.7864	-

D.3 Primer OPB08

	CbSR	CbSK	CbRN	CbKB	CiCB	CiPJ	CiSK	CiPN	CiKB	ScTD	ScRN	ScPK	ScCT	SiCT	SiSR
CbSR	-	1.0000	1.0000	1.0000	0.1520	0.1603	0.1545	0.1456	0.2878	0.1757	0.2033	0.1631	0.1815	0.1470	0.1397
CbSK	0.0000	-	1.0000	1.0000	0.1520	0.1603	0.1545	0.1456	0.2878	0.1757	0.2033	0.1631	0.1815	0.1470	0.1397
CbRN	0.0000	0.0000	-	1.0000	0.1520	0.1603	0.1545	0.1456	0.2878	0.1757	0.2033	0.1631	0.1815	0.1470	0.1397
CbKB	0.0000	0.0000	0.0000	-	0.1520	0.1603	0.1545	0.1456	0.2878	0.1757	0.2033	0.1631	0.1815	0.1470	0.1397
CiCB	0.8480	0.8480	0.8480	0.8480	-	0.8415	0.7957	0.8145	0.1619	0.1815	0.1786	0.1834	0.1926	0.1555	0.1797
CiPJ	0.8397	0.8397	0.8397	0.8397	0.1585	-	0.8778	0.8415	0.1682	0.1756	0.1806	0.1625	0.1720	0.1568	0.1686
CiSK	0.8455	0.8455	0.8455	0.8455	0.2043	0.1222	-	0.8313	0.1853	0.1773	0.1782	0.1696	0.1772	0.1518	0.1514
CiPN	0.8544	0.8544	0.8544	0.8544	0.1855	0.1585	0.1687	-	0.1560	0.1845	0.1769	0.1934	0.1999	0.1497	0.1754
CaKB	0.7122	0.7122	0.7122	0.7122	0.8381	0.8318	0.8147	0.8440	-	0.2612	0.1941	0.1743	0.1731	0.1898	0.1891
ScTD	0.8243	0.8243	0.8243	0.8243	0.8185	0.8244	0.8227	0.8155	0.7388	-	0.6597	0.6772	0.6058	0.2885	0.3067
ScRN	0.7967	0.7967	0.7967	0.7967	0.8214	0.8194	0.8218	0.8231	0.8059	0.3403	-	0.7543	0.6406	0.3156	0.3507
ScPK	0.8369	0.8369	0.8369	0.8369	0.8166	0.8375	0.8304	0.8066	0.8257	0.3228	0.2457	-	0.7040	0.3334	0.4182
ScCT	0.8185	0.8185	0.8185	0.8185	0.8074	0.8280	0.8228	0.8001	0.8269	0.3942	0.3594	0.2960	-	0.3158	0.3098
SiCT	0.8530	0.8530	0.8530	0.8530	0.8445	0.8432	0.8482	0.8503	0.8102	0.7115	0.6844	0.6666	0.6842	-	0.3758
SiSR	0.8603	0.8603	0.8603	0.8603	0.8203	0.8314	0.8486	0.8246	0.8109	0.6933	0.6493	0.5818	0.6902	0.6242	-
SiCBA	0.8588	0.8588	0.8588	0.8588	0.8600	0.8635	0.8679	0.8609	0.8458	0.6112	0.5832	0.5410	0.5499	0.6066	0.6378
SiPJ	0.8361	0.8361	0.8361	0.8361	0.8507	0.8425	0.8328	0.8571	0.8272	0.6243	0.5301	0.5521	0.6104	0.6047	0.6967
SiSK	0.8254	0.8254	0.8254	0.8254	0.8309	0.8325	0.8289	0.8325	0.8154	0.6233	0.5457	0.5584	0.5940	0.5699	0.7332
SiST	0.8478	0.8478	0.8478	0.8478	0.8468	0.8533	0.8517	0.8455	0.8406	0.5750	0.4931	0.4614	0.5007	0.6014	0.6466
SiRN	0.8372	0.8372	0.8372	0.8372	0.8514	0.8434	0.8490	0.8576	0.8286	0.5810	0.5075	0.4951	0.5316	0.6020	0.6759
SiCBS	0.8419	0.8419	0.8419	0.8419	0.8335	0.8426	0.8445	0.8247	0.7577	0.6203	0.5889	0.5268	0.6079	0.6845	0.6205
SmPK	0.8406	0.8406	0.8406	0.8406	0.8303	0.8466	0.8404	0.8243	0.8012	0.6855	0.6565	0.5949	0.6377	0.5759	0.5471
SmRN	0.8276	0.8276	0.8276	0.8276	0.7620	0.7946	0.8020	0.7596	0.8025	0.5972	0.7581	0.7899	0.7506	0.7452	0.7067
SmSS	0.8429	0.8429	0.8429	0.8429	0.7854	0.7681	0.7695	0.7663	0.7954	0.5317	0.6891	0.6492	0.6120	0.6906	0.5870
SiSR	0.8616	0.8616	0.8616	0.8616	0.7927	0.8269	0.8384	0.7883	0.8232	0.5493	0.6993	0.6832	0.6016	0.6786	0.6134
S2RN	0.8826	0.8826	0.8826	0.8826	0.8466	0.8745	0.8758	0.8598	0.8536	0.7158	0.8253	0.8109	0.8059	0.7541	0.7112
S3SS	0.8407	0.8407	0.8407	0.8407	0.8446	0.8394	0.8427	0.8467	0.8230	0.5439	0.6498	0.5557	0.5272	0.6485	0.5759
Scom	0.8513	0.8513	0.8513	0.8513	0.8564	0.8513	0.8421	0.8588	0.7621	0.7197	0.7605	0.7248	0.7112	0.7355	0.7251
Pevi	0.8755	0.8755	0.8755	0.8755	0.8839	0.8792	0.8826	0.8877	0.7214	0.7833	0.6376	0.6624	0.6329	0.6727	0.8184

D.3 Primer OPB08 (continued)

	SfCBA	SfPJ	SfSK	SfST	SfRN	SfCBS	SmpPK	SmRN	SmSS	SfSR	S2RN	S3SS	Scom	Pevi
CbSR	0.1412	0.1639	0.1746	0.1522	0.1628	0.1581	0.1594	0.1724	0.1571	0.1384	0.1174	0.1593	0.1487	0.1245
CbSK	0.1412	0.1639	0.1746	0.1522	0.1628	0.1581	0.1594	0.1724	0.1571	0.1384	0.1174	0.1593	0.1487	0.1245
CbRN	0.1412	0.1639	0.1746	0.1522	0.1628	0.1581	0.1594	0.1724	0.1571	0.1384	0.1174	0.1593	0.1487	0.1245
CbKB	0.1412	0.1639	0.1746	0.1522	0.1628	0.1581	0.1594	0.1724	0.1571	0.1384	0.1174	0.1593	0.1487	0.1245
CfCB	0.1400	0.1493	0.1691	0.1532	0.1486	0.1665	0.1697	0.2380	0.2146	0.2073	0.1524	0.1554	0.1436	0.1161
CfPJ	0.1365	0.1575	0.1675	0.1467	0.1566	0.1574	0.1534	0.2054	0.2319	0.1731	0.1255	0.1606	0.1487	0.1208
CfSK	0.1321	0.1672	0.1711	0.1483	0.1510	0.1555	0.1596	0.1980	0.2305	0.1616	0.1242	0.1573	0.1579	0.1174
CfPN	0.1391	0.1429	0.1675	0.1545	0.1424	0.1753	0.1757	0.2404	0.2337	0.2117	0.1402	0.1533	0.1412	0.1123
CfKB	0.1542	0.1728	0.1846	0.1594	0.1714	0.2423	0.1988	0.1975	0.2046	0.1768	0.1470	0.1770	0.2379	0.2786
ScTD	0.3888	0.3757	0.3767	0.4250	0.4190	0.3797	0.3145	0.4028	0.4683	0.4507	0.2842	0.4561	0.2803	0.2167
ScRN	0.4168	0.4699	0.4543	0.5069	0.4925	0.4111	0.3435	0.2419	0.3109	0.3007	0.1747	0.3502	0.2395	0.3624
ScPK	0.4590	0.4479	0.4416	0.5386	0.5049	0.4732	0.4051	0.2101	0.3508	0.3168	0.1891	0.4443	0.2752	0.3376
ScCT	0.4501	0.3896	0.4060	0.4993	0.4684	0.3921	0.3623	0.2494	0.3880	0.3984	0.1941	0.4728	0.2888	0.3671
SfCT	0.3934	0.3953	0.4301	0.3986	0.3980	0.3155	0.4241	0.2548	0.3094	0.3214	0.2459	0.3515	0.2645	0.3273
SfSR	0.3622	0.3033	0.2668	0.3534	0.3241	0.3795	0.4529	0.2933	0.4130	0.3866	0.2888	0.4241	0.2749	0.1816
SfCBA	-	0.4327	0.3994	0.3573	0.5070	0.3619	0.3658	0.4674	0.5166	0.2808	0.1633	0.4629	0.2684	0.2543
SfPJ	0.5673	-	0.5712	0.5297	0.5072	0.3919	0.3719	0.2506	0.3262	0.4117	0.2592	0.4035	0.2703	0.2452
SfSK	0.6006	0.4288	-	0.5154	0.4734	0.3913	0.4068	0.2277	0.3776	0.3112	0.2608	0.4865	0.2848	0.2091
SfST	0.5427	0.4703	0.4846	-	0.6266	0.4201	0.4072	0.2585	0.4242	0.3118	0.3456	0.5324	0.2905	0.1835
SfRN	0.4930	0.4928	0.5266	0.3734	-	0.3974	0.3732	0.2651	0.3502	0.4232	0.2728	0.5210	0.2701	0.2110
SfCBS	0.6381	0.6081	0.6087	0.5799	0.6026	-	0.3919	0.2662	0.3372	0.3474	0.1924	0.4670	0.3570	0.1616
SmpPK	0.6342	0.6281	0.5932	0.5928	0.6268	0.6081	-	0.2818	0.3868	0.3386	0.2537	0.4270	0.2522	0.2951
SmRN	0.5326	0.7494	0.7723	0.7415	0.7349	0.7388	0.7182	-	0.3851	0.4532	0.1904	0.4769	0.2200	0.2279
SmSS	0.4834	0.6738	0.6224	0.5758	0.6498	0.6628	0.6132	0.6149	-	0.4560	0.2776	0.3017	0.1959	0.1560
SfSR	0.3192	0.5883	0.6888	0.6882	0.5768	0.6526	0.6614	0.5468	0.5440	-	0.1984	0.3432	0.2532	0.1449
S2RN	0.8367	0.7408	0.7392	0.6544	0.7272	0.8076	0.7463	0.8096	0.7224	0.8016	-	0.5418	0.3162	0.2165
S3SS	0.5371	0.5965	0.5135	0.4676	0.4790	0.5330	0.5730	0.5231	0.6983	0.6568	0.4582	-	0.3379	0.2539
Scom	0.7316	0.7297	0.7152	0.7095	0.7299	0.6430	0.7478	0.7800	0.8041	0.7468	0.6838	0.6621	-	0.1301
Pevi	0.7457	0.7548	0.7909	0.8165	0.7890	0.8384	0.7049	0.7721	0.8440	0.8551	0.7835	0.7461	0.8699	-

D.4 Primer UBC210

	CbSR	CbSK	CbRN	CbKB	CiCB	CiPJ	CiSK	CiPN	CsKB	ScTD	ScRN	ScPK	ScCT	SfCT	SfSR
CbSR	-	0.8238	0.8035	0.7455	0.4931	0.5004	0.4299	0.5003	0.4602	0.2396	0.2057	0.2284	0.1926	0.3130	0.2893
CbSK	0.1762	-	0.8437	0.7706	0.4696	0.5147	0.4361	0.4743	0.4833	0.2398	0.1845	0.2172	0.1868	0.3618	0.3204
CbRN	0.1965	0.1563	-	0.8952	0.5043	0.5503	0.4630	0.5112	0.5873	0.2751	0.1823	0.1964	0.1763	0.3741	0.3569
CbKB	0.2545	0.2294	0.1048	-	0.5533	0.5791	0.5174	0.5406	0.5523	0.1947	0.1581	0.1625	0.1442	0.3031	0.3111
CiCB	0.1439	0.5304	0.4957	0.4467	-	0.8001	0.7925	0.7867	0.3603	0.1796	0.2020	0.1521	0.1457	0.1436	0.1396
CiPJ	0.4996	0.4853	0.4497	0.4209	0.1999	-	0.7901	0.7436	0.3916	0.1861	0.1907	0.1354	0.1380	0.1957	0.1943
CiSK	0.5701	0.5639	0.5370	0.4826	0.2075	0.2099	-	0.7629	0.3486	0.1909	0.2213	0.1455	0.1428	0.1766	0.1836
CiPN	0.4997	0.5257	0.4888	0.4594	0.2133	0.2564	0.2371	-	0.3889	0.1970	0.2147	0.1665	0.1508	0.1701	0.1864
CsKB	0.5398	0.5167	0.4127	0.4477	0.6397	0.6084	0.6514	0.6111	-	0.2883	0.2312	0.2296	0.2103	0.2887	0.2336
ScTD	0.7604	0.7602	0.7249	0.8053	0.8204	0.8139	0.8091	0.8030	0.6022	-	0.5268	0.5004	0.5015	0.3137	0.2883
ScRN	0.7943	0.8155	0.8177	0.8419	0.7980	0.8093	0.7787	0.7853	0.6705	0.4732	-	0.5010	0.5086	0.2739	0.2541
ScPK	0.7716	0.7828	0.8036	0.8375	0.8479	0.8646	0.8545	0.8335	0.6016	0.4996	0.4990	-	0.6169	0.3340	0.2069
ScCT	0.8074	0.8132	0.8237	0.8558	0.8543	0.8620	0.8572	0.8492	0.5973	0.4985	0.4914	0.3831	-	0.3453	0.2832
SfCT	0.6870	0.6382	0.6259	0.6969	0.8654	0.8043	0.8234	0.8299	0.4322	0.6863	0.7261	0.6660	0.6547	-	0.4956
SfSR	0.7107	0.6796	0.6431	0.6889	0.8604	0.8057	0.8164	0.8136	0.4375	0.7117	0.7459	0.7931	0.7168	0.5044	-
SfCBA	0.7372	0.6885	0.6957	0.7602	0.8966	0.8458	0.8735	0.8815	0.4656	0.7444	0.7375	0.6862	0.6896	0.4189	0.3973
SfPJ	0.7759	0.7447	0.7817	0.8361	0.8571	0.8293	0.8180	0.8344	0.4818	0.7257	0.6921	0.6743	0.6579	0.4547	0.5733
SfSK	0.7863	0.7426	0.7761	0.8298	0.8778	0.8021	0.8080	0.8332	0.4836	0.7234	0.7428	0.7101	0.6887	0.4520	0.5150
SfST	0.7840	0.7768	0.8166	0.8406	0.8766	0.8825	0.8738	0.8596	0.5524	0.7056	0.7339	0.5328	0.5777	0.5717	0.6402
SfRN	0.7578	0.7546	0.7958	0.7910	0.8824	0.8970	0.8906	0.8811	0.5339	0.7413	0.7543	0.5603	0.6105	0.5715	0.6177
SfCBS	0.7048	0.6984	0.7181	0.7337	0.8356	0.8262	0.8361	0.8239	0.4745	0.7311	0.7297	0.6323	0.6329	0.5336	0.5180
SmPK	0.6160	0.5866	0.5649	0.6457	0.8184	0.7714	0.7823	0.7766	0.6738	0.7117	0.7688	0.7704	0.7897	0.7113	0.7664
SmRN	0.7930	0.7929	0.8520	0.8384	0.8446	0.8408	0.8483	0.8545	0.8496	0.5374	0.7537	0.7382	0.5874	0.6034	0.6222
SmSS	0.7220	0.7199	0.7400	0.7477	0.7683	0.7502	0.7663	0.7752	0.7191	0.4902	0.6942	0.6994	0.6051	0.6148	0.5995
SfSR	0.7365	0.7291	0.7391	0.7529	0.8713	0.8408	0.8447	0.5356	0.8105	0.4388	0.7340	0.7465	0.6468	0.6146	0.5018
S2RN	0.7463	0.7286	0.7885	0.8606	0.8319	0.7914	0.8208	0.8618	0.7850	0.7040	0.5453	0.5461	0.6794	0.6402	0.6238
S3SS	0.8022	0.7922	0.8132	0.8295	0.8472	0.8318	0.8377	0.8547	0.8092	0.5441	0.6307	0.5984	0.5621	0.5457	0.6295
Scom	0.7418	0.7286	0.7041	0.6806	0.8631	0.8072	0.5473	0.8710	0.7277	0.6313	0.8105	0.7863	0.7359	0.7266	0.6379
Pevi	0.6739	0.6491	0.7526	0.8017	0.8111	0.7911	0.8064	0.7988	0.8056	0.7106	0.7875	0.7592	0.7200	0.7288	0.6669

D.4 Primer UBC210 (continued)

	SICBA	SIPJ	SISK	SIST	SIRN	SICBS	SmPK	SmRN	SmSS	SISR	S2RN	S3SS	Scom	Pevi
ChSR	0.2628	0.2241	0.2137	0.2160	0.2422	0.2952	0.3840	0.2070	0.2780	0.2635	0.2537	0.1978	0.2382	0.3261
ChSK	0.3115	0.2553	0.2574	0.2232	0.2454	0.3016	0.4134	0.2074	0.2801	0.2709	0.2714	0.2078	0.2714	0.3509
ChRN	0.3043	0.2183	0.2239	0.1834	0.2042	0.2819	0.4351	0.1480	0.2600	0.2609	0.2115	0.1868	0.2959	0.2474
ChKB	0.2398	0.1639	0.1702	0.1594	0.2090	0.2663	0.3543	0.1616	0.2522	0.2471	0.1394	0.1705	0.3194	0.1983
CiCB	0.1034	0.1429	0.1222	0.1234	0.1176	0.1644	0.1816	0.1554	0.3317	0.1287	0.1609	0.1528	0.1369	0.1889
CiPJ	0.1542	0.1707	0.1979	0.1175	0.1030	0.1738	0.2286	0.1592	0.2498	0.1592	0.2086	0.1682	0.1928	0.2089
CiSK	0.1265	0.1820	0.1920	0.1262	0.1094	0.1639	0.2177	0.1517	0.2337	0.1553	0.1792	0.1623	0.1527	0.1936
CiPN	0.1185	0.1656	0.1668	0.1404	0.1189	0.1761	0.2234	0.1455	0.2248	0.1644	0.1380	0.1453	0.1290	0.2012
CsKB	0.1885	0.1429	0.1544	0.1780	0.1335	0.2113	0.3262	0.1504	0.2809	0.1895	0.2150	0.1971	0.2723	0.1944
SeTD	0.2556	0.2743	0.2766	0.2944	0.2587	0.2689	0.3978	0.4626	0.5098	0.5612	0.2960	0.4559	0.3687	0.2894
SeRN	0.2625	0.3079	0.2572	0.2661	0.2457	0.2703	0.3295	0.2463	0.3058	0.2660	0.4547	0.3693	0.1895	0.2125
SePK	0.3138	0.3257	0.2899	0.4672	0.4397	0.3677	0.3984	0.2618	0.3006	0.2535	0.4539	0.4016	0.2137	0.2408
SeCT	0.3104	0.3421	0.3113	0.4223	0.3895	0.3671	0.4027	0.4126	0.3949	0.3532	0.3206	0.4379	0.2641	0.2800
SICT	0.5811	0.5453	0.5480	0.4283	0.4285	0.4664	0.5678	0.3966	0.3852	0.3854	0.3598	0.4543	0.2734	0.2712
SISR	0.6027	0.4267	0.4850	0.5598	0.3823	0.4820	0.5265	0.3778	0.4005	0.4982	0.2762	0.3705	0.3621	0.3331
SICBA	-	0.5846	0.5990	0.4319	0.4401	0.5130	0.5344	0.2343	0.2729	0.5650	0.3126	0.1808	0.3350	0.2900
SIPJ	0.4154	-	0.6816	0.4722	0.4603	0.4304	0.5182	0.3410	0.3803	0.5374	0.2995	0.3372	0.3580	0.4047
SISK	0.4010	0.3184	-	0.4660	0.4703	0.4518	0.5164	0.4514	0.4415	0.4884	0.2812	0.3950	0.3528	0.3532
SIST	0.5681	0.5278	0.5340	-	0.6158	0.4605	0.4476	0.3660	0.3784	0.5329	0.2554	0.3193	0.3269	0.3326
SIRN	0.5599	0.5397	0.5297	0.3842	-	0.4948	0.4661	0.4873	0.4145	0.5041	0.2543	0.4141	0.2892	0.2995
SICBS	0.4870	0.5696	0.4582	0.5395	0.5052	-	0.5255	0.4765	0.4209	0.5423	0.2273	0.4310	0.3108	0.3002
SmPK	0.8115	0.8571	0.8456	0.8220	0.8665	0.7887	-	0.4023	0.4215	0.5566	0.2568	0.4083	0.3426	0.2565
SmRN	0.7657	0.6590	0.5486	0.6340	0.5127	0.5235	0.5977	-	0.5805	0.3846	0.2435	0.3792	0.3785	0.2784
SmSS	0.7271	0.6197	0.5585	0.6216	0.5855	0.5791	0.5785	0.4195	-	0.3920	0.3007	0.3566	0.1984	0.3251
SISR	0.4350	0.4626	0.5116	0.4671	0.4959	0.4577	0.4434	0.6154	0.6080	-	0.2454	0.5558	0.4185	0.3096
S2RN	0.6874	0.7005	0.7188	0.7446	0.7657	0.7727	0.7432	0.7565	0.6993	0.7546	-	0.5670	0.3127	0.3106
S3SS	0.8192	0.6628	0.6050	0.6807	0.5859	0.5690	0.5917	0.6208	0.6434	0.4442	0.4330	-	0.3588	0.3276
Scom	0.6650	0.6420	0.6472	0.6731	0.7108	0.6892	0.6574	0.6215	0.8016	0.5815	0.6873	0.6412	-	0.2309
Pevi	0.7100	0.5953	0.6468	0.6674	0.7005	0.6998	0.7435	0.7216	0.6749	0.6904	0.6894	0.6724	0.7691	-

D.5 Primer UBC220

	CbSR	CbSK	CbRN	CbKB	CiCB	CiPJ	CiSK	CiPN	CsKB	ScTD	ScRN	ScPK	ScCT	SiCT	SiSR
CbSR	-	0.8996	0.9258	0.9343	0.4352	0.4132	0.4683	0.4537	0.2140	0.2644	0.2383	0.2971	0.2672	0.2328	0.1955
CbSK	0.1004	-	0.9003	0.9163	0.4448	0.4148	0.4895	0.4752	0.1794	0.2792	0.2767	0.3370	0.3739	0.2908	0.2812
CbRN	0.0742	0.0997	-	0.9516	0.4152	0.4015	0.4397	0.4197	0.1925	0.2751	0.2380	0.3004	0.2801	0.2209	0.1757
CbKB	0.0657	0.0837	0.0484	-	0.4282	0.4051	0.4568	0.4365	0.1866	0.2672	0.2314	0.2917	0.2714	0.2262	0.1971
CiCB	0.5648	0.5552	0.5848	0.5718	-	0.8688	0.8727	0.8657	0.3392	0.2618	0.2711	0.2722	0.2254	0.3043	0.2213
CiPJ	0.5868	0.5852	0.5985	0.5949	0.1312	-	0.8522	0.8517	0.3487	0.2710	0.2546	0.2492	0.2273	0.2884	0.1961
CiSK	0.5317	0.5105	0.5603	0.5432	0.1273	0.1478	-	0.8896	0.3230	0.2958	0.3193	0.3118	0.2474	0.3421	0.2541
CiPN	0.5463	0.5248	0.5803	0.5635	0.1343	0.1483	0.1104	-	0.3186	0.3044	0.3289	0.3118	0.2469	0.3380	0.3430
CsKB	0.7860	0.8026	0.8075	0.8134	0.6608	0.6513	0.6770	0.6814	-	0.2630	0.2027	0.1581	0.1827	0.1992	0.2343
ScTD	0.7356	0.7208	0.7249	0.7328	0.7382	0.7290	0.7042	0.6956	0.7370	-	0.6818	0.6281	0.5260	0.3016	0.3334
ScRN	0.7617	0.7233	0.7620	0.7686	0.7289	0.7454	0.6807	0.6711	0.7973	0.3182	-	0.7544	0.5603	0.3619	0.3928
ScPK	0.7029	0.6630	0.6996	0.7083	0.7278	0.7508	0.6882	0.6882	0.8419	0.3719	0.2456	-	-	0.3511	0.3699
ScCT	0.7328	0.7261	0.7199	0.7286	0.7746	0.7727	0.7526	0.7531	0.8173	0.4740	0.4397	0.4065	-	0.3190	0.2716
SiCT	0.7672	0.7092	0.7791	0.7738	0.6957	0.7116	0.6579	0.6620	0.8008	0.6984	0.6381	0.6489	0.6810	-	0.4865
SiSR	0.8045	0.7188	0.8243	0.8029	0.7787	0.8039	0.7459	0.7570	0.7657	0.6666	0.6072	0.6301	0.7284	0.5135	-
SiCBA	0.7249	0.6796	0.7316	0.7270	0.7898	0.8157	0.7498	0.7617	0.8355	0.7643	0.7150	0.7352	0.6662	0.5558	0.5774
SiPJ	0.7762	0.7082	0.7896	0.7770	0.7745	0.7959	0.7358	0.7480	0.8402	0.6442	0.6236	0.6401	0.6687	0.5430	0.5227
SiSK	0.7819	0.7467	0.7871	0.7884	0.7369	0.7553	0.6953	0.7095	0.8217	0.7037	0.6283	0.6632	0.6375	0.5533	0.6377
SiST	0.7314	0.6868	0.7302	0.7395	0.7604	0.7872	0.7181	0.7327	0.8162	0.7839	0.7471	0.7297	0.6982	0.6207	0.6743
SiRN	0.6688	0.6376	0.6629	0.6739	0.6814	0.6995	0.6374	0.6553	0.7695	0.7500	0.7094	0.7065	0.6791	0.6078	0.6653
SiCBS	0.8543	0.8001	0.8638	0.8631	0.7852	0.8220	0.7781	0.7664	0.7987	0.7559	0.6710	0.6610	0.7236	0.6358	0.5733
SmPK	0.8187	0.7619	0.8314	0.8234	0.7083	0.7066	0.6930	0.6886	0.7900	0.7296	0.6976	0.7109	0.7317	0.5560	0.4487
SmRN	0.8352	0.7964	0.8441	0.8498	0.8269	0.8375	0.7961	0.7956	0.8005	0.6719	0.7440	0.6976	0.7130	0.7685	0.6882
SmSS	0.7575	0.7068	0.7607	0.7696	0.6682	0.6907	0.6317	0.6428	0.8431	0.6660	0.7002	0.6078	0.6070	0.6826	0.6303
SiSR	0.8233	0.7603	0.8393	0.8327	0.7765	0.7967	0.7501	0.7537	0.7555	0.7849	0.7146	0.6646	0.6579	0.7580	0.5932
SiRN	0.6001	0.5983	0.6098	0.6015	0.6961	0.6751	0.6884	0.6952	0.6981	0.6339	0.6402	0.6520	0.6785	0.7043	0.6467
SiSS	0.8088	0.7528	0.8277	0.8346	0.6851	0.6960	0.6609	0.6443	0.8275	0.6457	0.7485	0.6692	0.6735	0.7457	0.6528
Scom	0.8556	0.8073	0.8631	0.8681	0.7313	0.7288	0.6610	0.6674	0.8088	0.6267	0.7290	0.6398	0.5694	0.6600	0.6555
Pevi	0.6451	0.6452	0.6844	0.6944	0.4747	0.5519	0.5325	0.5311	0.7040	0.6400	0.8446	0.8284	0.8058	0.8167	0.7146

D.5 Primer UBC220 (continued)

	SICBA	SIPJ	SISK	SIST	SIRN	SICBS	SmPK	SmRN	SmSS	S1SR	S2RN	S3SS	Scm	Pevi
CbSR	0.2751	0.2238	0.2181	0.2686	0.3312	0.1457	0.1813	0.1648	0.2425	0.1767	0.3999	0.1912	0.1444	0.3549
CbSK	0.3204	0.2918	0.2533	0.3132	0.3624	0.1999	0.2381	0.2036	0.2932	0.2397	0.4017	0.2472	0.1927	0.3548
CbRN	0.2684	0.2104	0.2129	0.2698	0.3371	0.1362	0.1686	0.1559	0.2393	0.1607	0.3902	0.1723	0.1369	0.3156
CbKB	0.2730	0.2230	0.2116	0.2605	0.3261	0.1369	0.1766	0.1502	0.2304	0.1673	0.3985	0.1654	0.1319	0.3056
CiCB	0.2102	0.2255	0.2631	0.2396	0.3186	0.2148	0.2917	0.1731	0.3318	0.2235	0.3039	0.3149	0.2987	0.5253
CiPJ	0.1847	0.2041	0.2447	0.2128	0.3005	0.1780	0.2734	0.1625	0.3093	0.2033	0.3249	0.3040	0.2712	0.4481
CiSK	0.2502	0.2642	0.3047	0.2819	0.3626	0.2219	0.3070	0.2039	0.3683	0.2499	0.3116	0.3391	0.3390	0.4675
CiPN	0.3383	0.2520	0.3905	0.2673	0.3447	0.2336	0.3114	0.2044	0.3572	0.2463	0.3048	0.3557	0.3326	0.4689
CsKB	0.1645	0.1598	0.1783	0.1838	0.2305	0.2013	0.2100	0.1995	0.1569	0.2445	0.3019	0.1725	0.1912	0.2960
ScTD	0.2357	0.3558	0.2963	0.2161	0.2500	0.2441	0.2704	0.3281	0.3340	0.5151	0.3661	0.3543	0.3733	0.3600
ScRN	0.2850	0.3764	0.3717	0.2529	0.2906	0.3290	0.3024	0.2560	0.2998	0.2854	0.3598	0.2515	0.2710	0.1554
ScPK	0.2648	0.3599	0.3368	0.2703	0.2935	0.3390	0.2891	0.3024	0.3922	0.3354	0.3480	0.3308	0.3602	0.1716
ScCT	0.3338	0.3313	0.3625	0.3018	0.3209	0.2764	0.2683	0.2807	0.3930	0.3421	0.3215	0.3265	0.1306	0.1942
SfCT	0.4442	0.4570	0.4467	0.3793	0.3922	0.3642	0.4440	0.2315	0.3174	0.2420	0.2957	0.2543	0.3400	0.1833
SfSR	0.4226	0.4773	0.3623	0.3257	0.3347	0.4267	0.5513	0.3118	0.3697	0.4068	0.3533	0.3472	0.3445	0.2854
SfCBA	-	0.5231	0.5847	0.5179	0.5215	0.3476	0.3907	0.3889	0.3081	0.5823	0.4194	0.3139	0.2774	0.3242
SfPJ	0.4769	-	0.5366	0.4878	0.4583	0.3341	0.4855	0.3602	0.4049	0.3767	0.3263	0.3855	0.4035	0.2607
SfSK	0.4153	0.4634	-	0.4669	0.4946	0.3770	0.3711	0.4695	0.4630	0.4366	0.3704	0.4631	0.4086	0.2554
SfST	0.4821	0.5122	0.5331	-	0.5273	0.3369	0.3224	0.3636	0.5117	0.3493	0.2862	0.4286	0.4573	0.2794
SfRN	0.4785	0.5417	0.5054	0.4727	-	0.3626	0.3275	0.3724	0.4225	0.3311	0.3212	0.4051	0.4141	0.3022
SfCBS	0.6524	0.6659	0.6230	0.6631	0.6374	-	0.3648	0.3342	0.3657	0.3366	0.3797	0.3474	0.4049	0.2821
SmPK	0.6093	0.5145	0.6289	0.6776	0.6725	0.6354	-	0.3710	0.3446	0.4094	0.2333	0.3620	0.3442	0.3129
SmRN	0.6111	0.6398	0.5305	0.6364	0.6276	0.6658	0.6290	-	0.4287	0.3979	0.2590	0.3564	0.3895	0.3000
SmSS	0.6919	0.5951	0.5370	0.4883	0.5775	0.6343	0.6554	0.5713	-	0.3062	0.2077	0.1736	0.1889	0.2064
S1SR	0.4177	0.6233	0.5634	0.6507	0.6689	0.6634	0.5906	0.6021	0.6938	-	0.3912	0.4949	0.3054	0.2251
S2RN	0.5806	0.6737	0.6296	0.7138	0.6788	0.6203	0.7667	0.7749	0.6451	0.6088	-	0.5377	0.4554	0.3549
S3SS	0.6861	0.6145	0.5369	0.5714	0.5949	0.6526	0.6380	0.6436	0.6425	0.5001	0.4623	-	0.4164	0.3575
Scm	0.7226	0.5965	0.5914	0.5427	0.5859	0.5951	0.6558	0.6105	0.8111	0.7410	0.7923	0.8264	-	0.2623
Pevi	0.6758	0.7393	0.7446	0.7206	0.6978	0.7179	0.6871	0.7000	0.7936	0.6946	0.5446	0.5836	0.7377	-

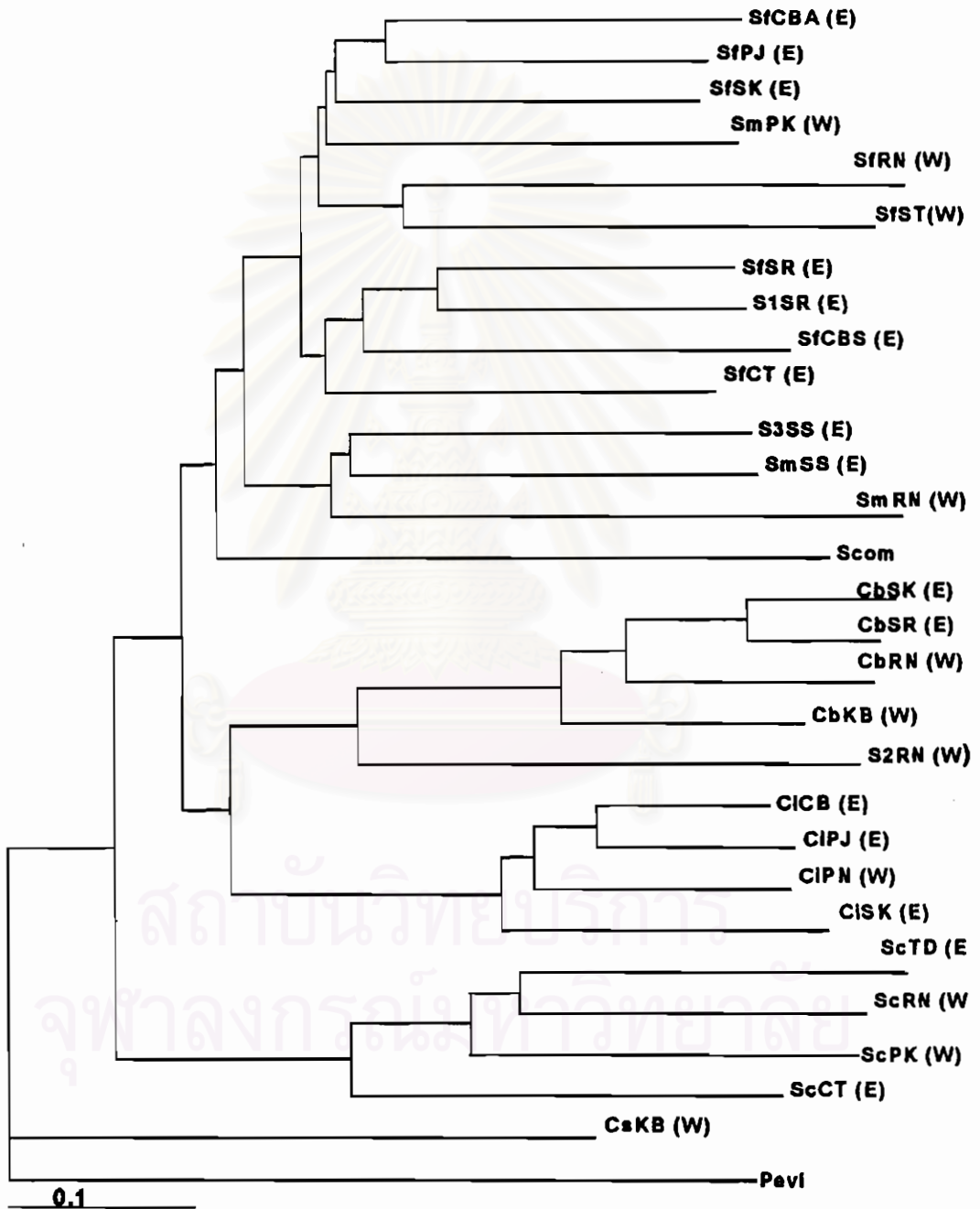
Appendix E

A neighbor-joining tree illustrating genetic relationships of oyster species locally found in Thailand based on genetic distances resulted from RAPD analysis using primers OPA09 (E.1), OPB01 (E.2), OPB08 (E.3), UBC210 (E.4) and UBC220 (E.5). The Australian oyster (*S. commercialis*) and the mussel (*P. viridis*) were included as an ingroup and an outgroup references, respectively. Detailed information and abbreviations of sample sites are shown in Table 2.1.

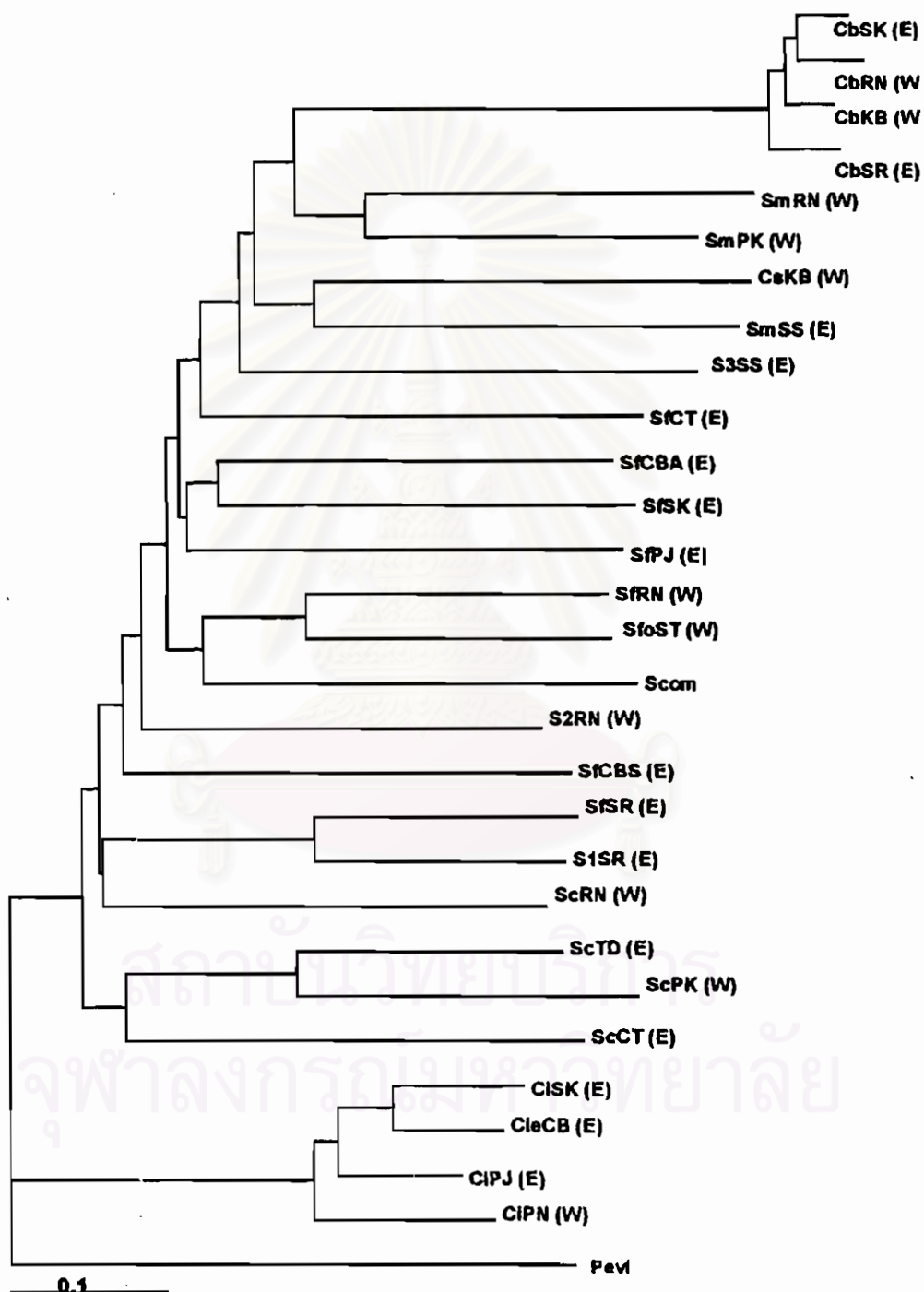


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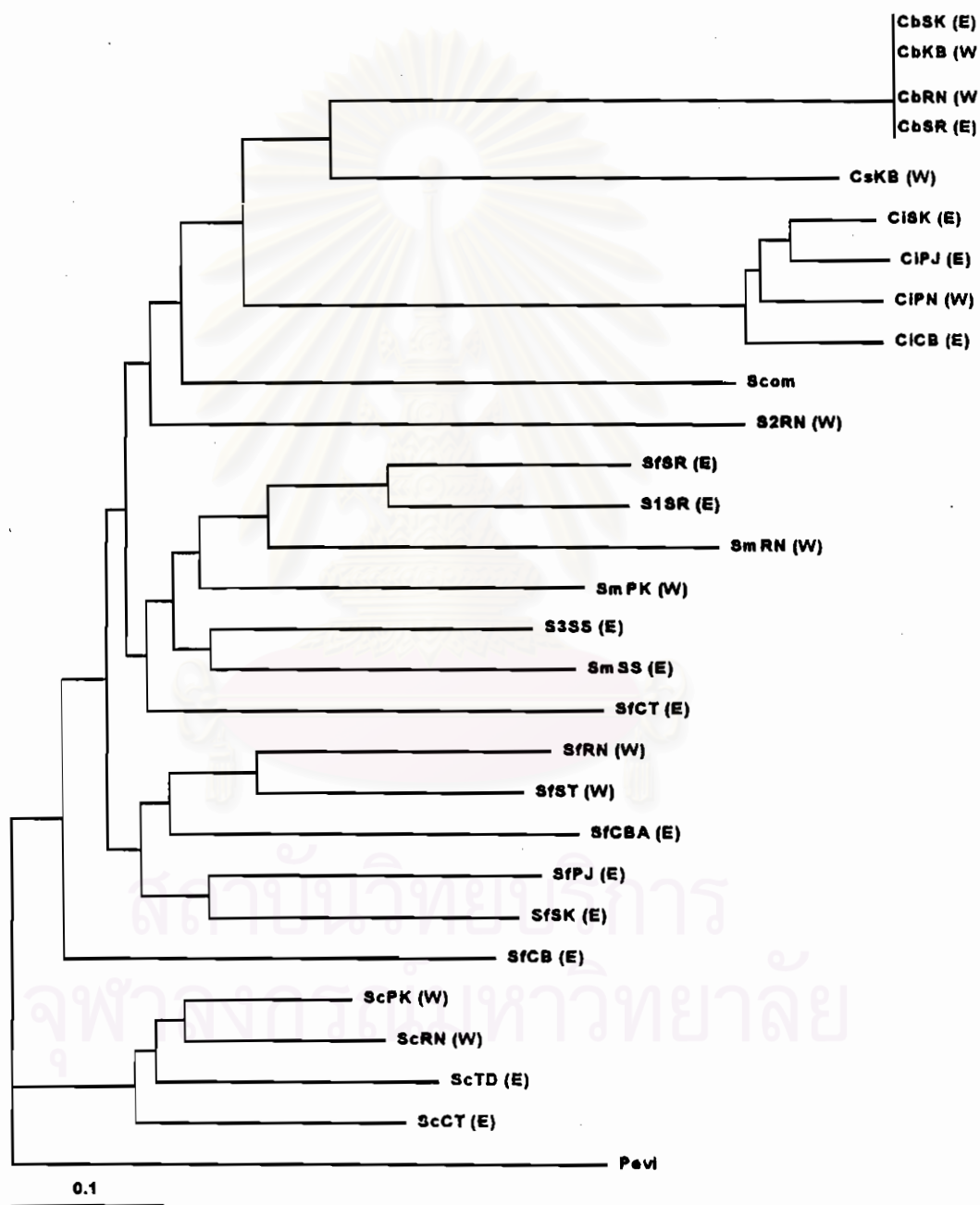
E.1 Primer OPA09



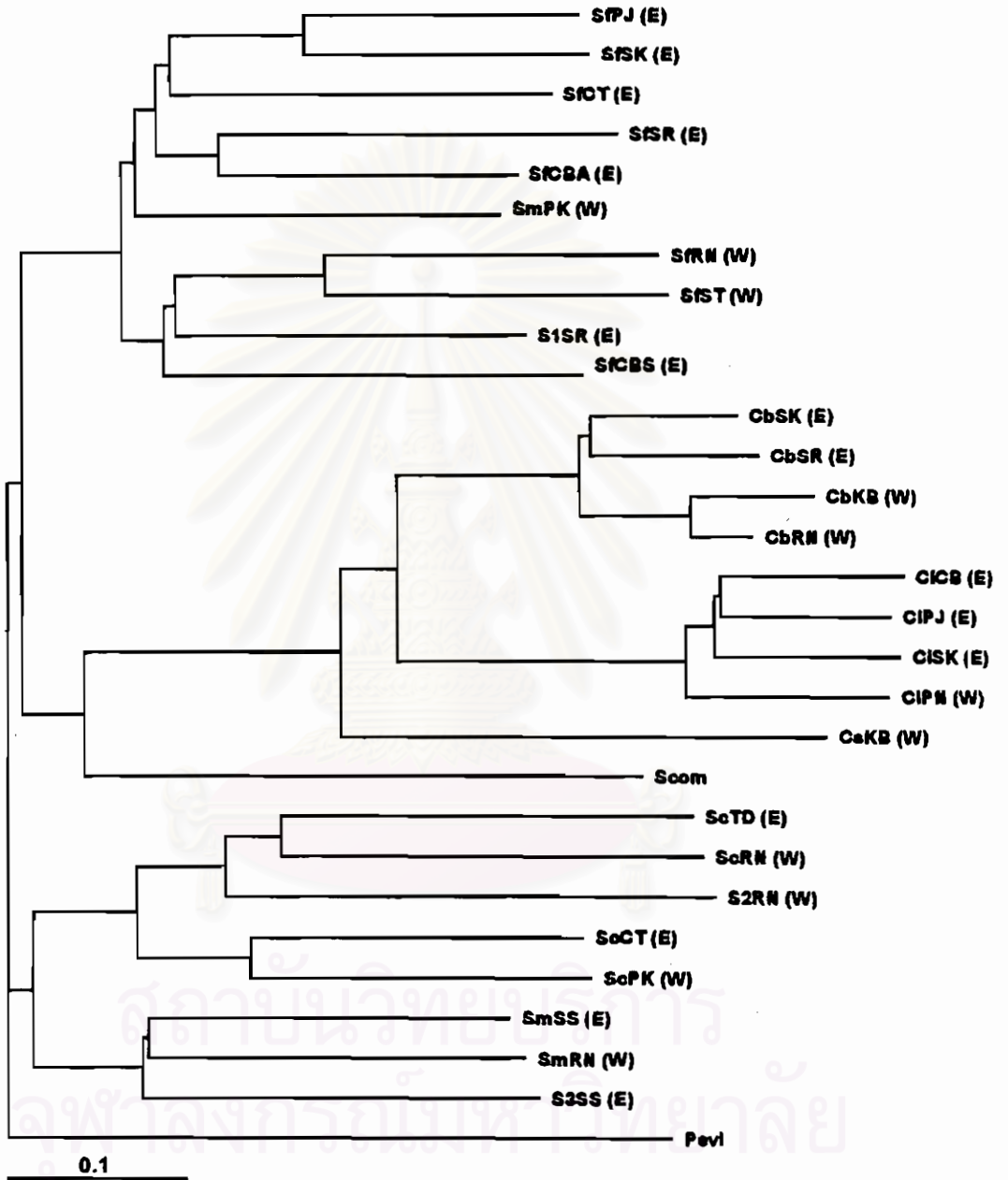
E.2 Primer OPB01



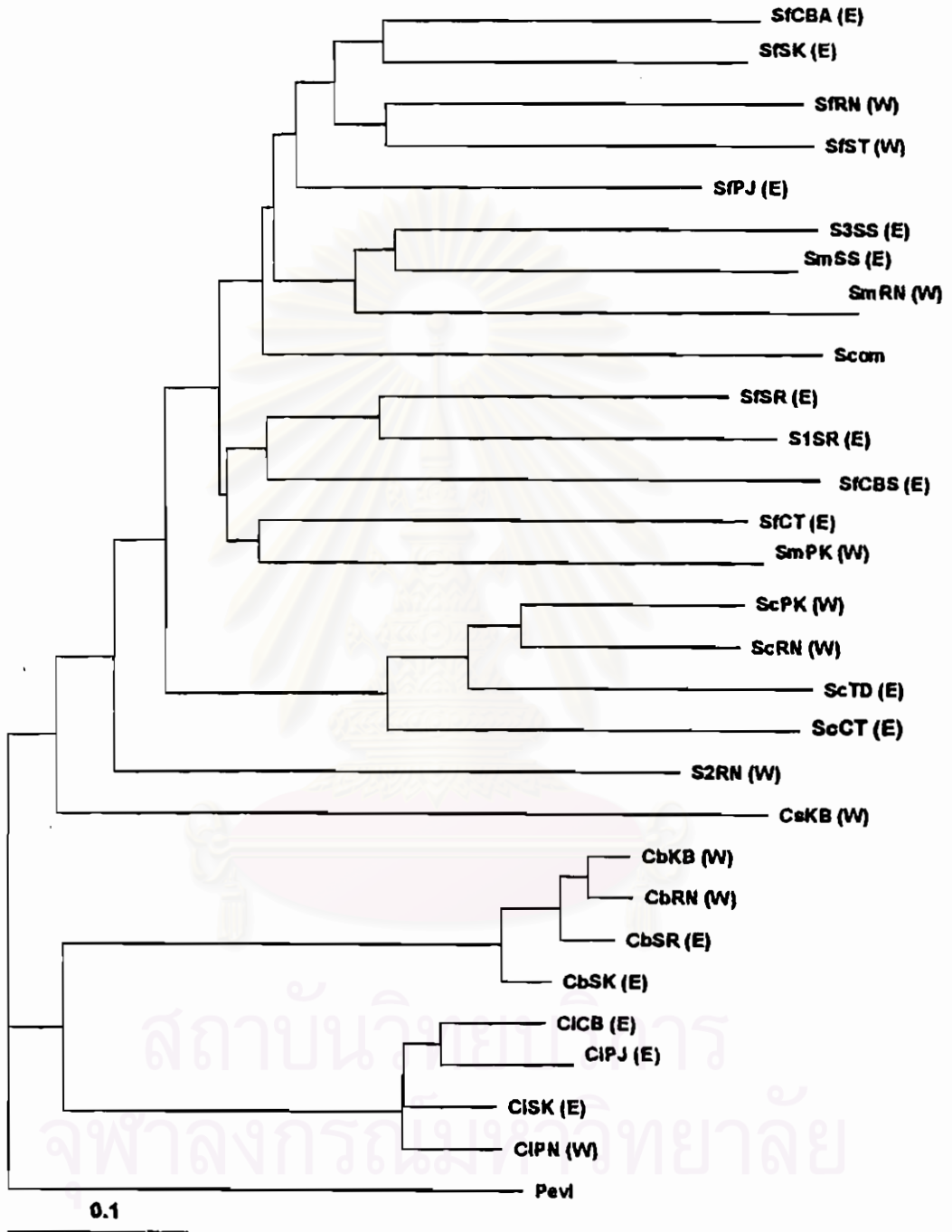
E.3 Primer OPB08



E.4 Primer UBC210



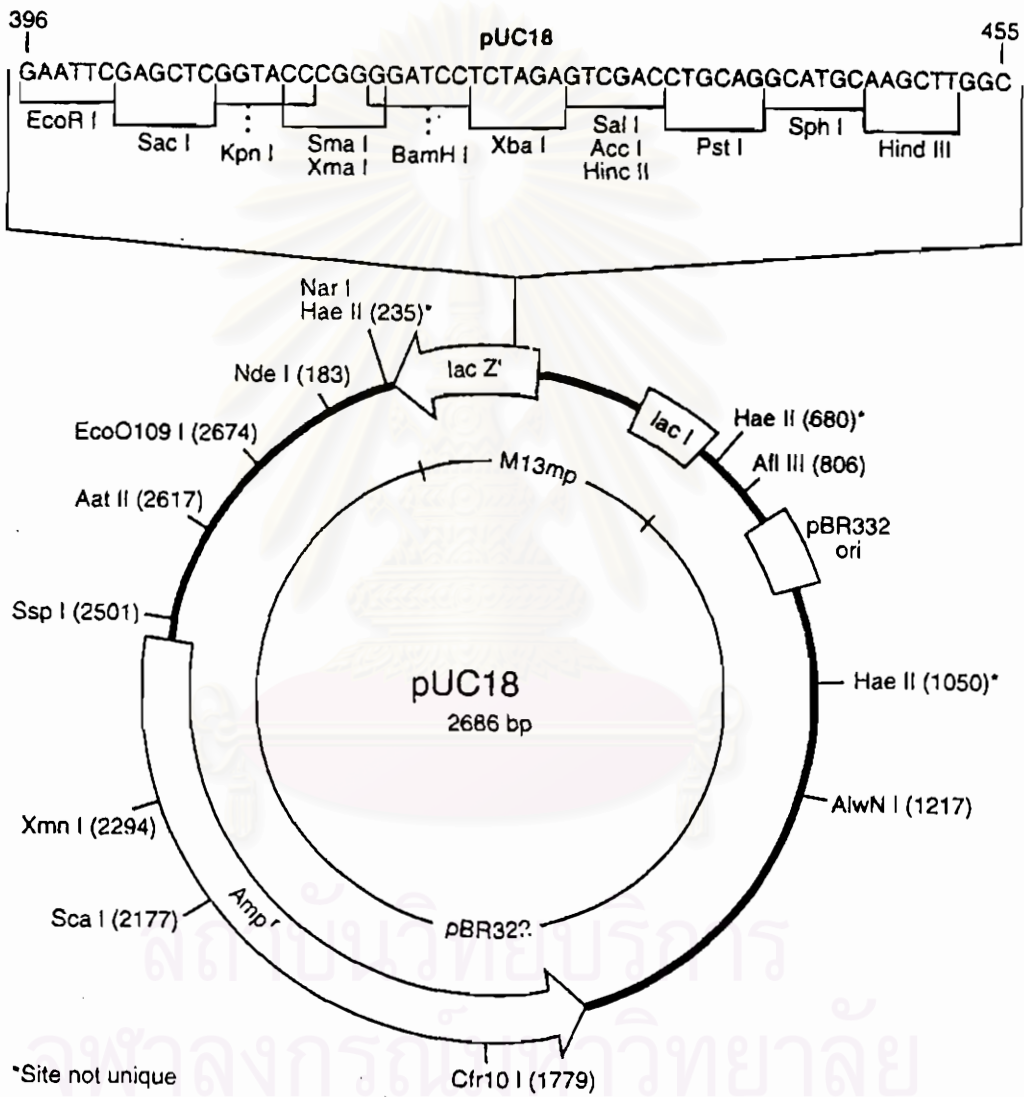
E.5 Primer UBC220



Appendix F

Restriction mapping of plasmid pUC18 (F.1) and pGEM^R-T easy vector (F.2)

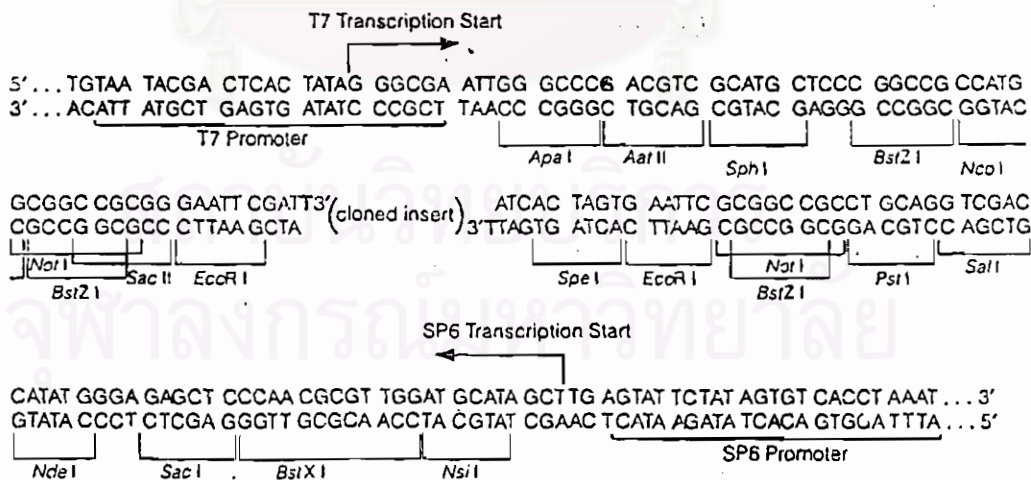
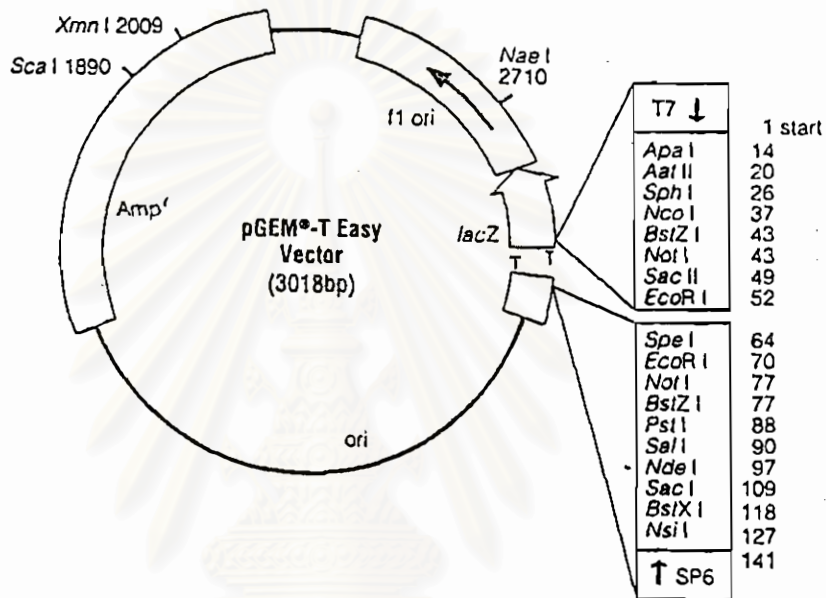
F.1 pUC18



Polycoding Sites
pUC18

1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	7	8	
Thr	Met	Ile	Thr	Aan	Ser	Ser	Ser	Val	Pro	Gly	Asp	Pro	Leu	Glu	Ser	Thr	Cys	Arg	His	Ala	Ser	Leu	Ala	Leu	Ala	
ATG	ACC	ATG	ATT	ACG	AAT	TCG	AGC	TCG	GTA	CCC	GGG	GAT	CCT	CTA	GAG	TCG	ACC	TGC	AGG	CAT	GCA	AGC	TTG	GCA	CTG	GCC
				EcoRI		SacI		KpnI		SmaI XmaI		BamHI		XbaI		SalI AccI HincII		PstI		SphI		HindIII				

F.2 pGEM^R-T easy vector





Biography

Action 2LT. Piti Amparyup was born on August 3, 1976 in Bangkok, Thailand. He graduated with the degree of Bachelor of Science in Technology in Animal Production from the Institute of Science and Technology at Mahidol University in 1996. In 1997, he has studied in Master degree of Science at the department of Biochemistry, Chulalongkorn University.



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