Appendix A

Preparation of Reagents and Buffers

Reagent for DNA isolation and electrophoresis

Digestion buffer :

2M Nacl (116.9 mg/ml)	25.0	ml
1M Tris pH 8.0 (121.1 mg/ml)	25.0	ml
0.5M EDTA (186.1 mg/ml)	2.0	ml

Adjust the volume to 0.5 liter with distilled water

EDTA (0.5 M)

EDTA ($Na_2.2H_2O$)	186.1	g

Adjust pH to 8.0 with NaOH

Adjust the volume to 1 liter with distilled water

Autoclave

PBS :

Sodium chloride	8.0	g
di-Sodium hydrogen phosphate	1.44	g
Potassium dihydrogen phosphate	0.24	g
Potassium chloride	0.20	g

Adjust pH to 7.4

Adjust the volume to 1 liter with distilled water

Autoclave

1X TBE buffer:

Tris	108.0	g
Boric acid	55.0	g
EDTA (0.5 M)	40.0	ml

Adjust the volume to 1 liter with distilled water

1x TE buffer:

1M Tris pH 8.0 (121.1 mg/ml)	10.0	ml
0.5M EDTA (186.1 mg/ml)	2.0	ml

Adjust the volume to 1 liter with distilled water

Tris (pH 8.0)

Tris base	121.0	g

Adjust the volume to 1 liter with distilled water

Reagent for Isolation and Purification of Plasmid DNA

Resuspension buffer (Buffer P1)

50 mM Tris-Cl	6.06 g Tris base
10 mM $Na_2EDTA.2H_2O$	3.72 g $Na_2EDTA.2H_2O$
100 μg/ml RNaseA	pH 8.0 (HCl)

Adjust the volume to 1 liter with distilled water

Lysis buffer (Buffer P2)

200 mM NaOH	8.0 g NaOH
1 % SDS (w/v)	50 ml 20% SDS (w/v)

Adjust the volume to 1 liter with distilled water

Neutralization buffer (Buffer P3)

3.0 M potassium acetate	294.5 g potassium acetate
	pH 5.5 (Acetic acid)

Adjust the volume to 1 liter with distilled water

Equilibration buffer (Buffer QBT)

750 mM NaCl	43.83 g NaCl
50 M MOPS	10.46 g MOPS
15% isopropanol (v/v)	pH 7.0 (NaOH)
0.15% Triton X-100 (v/v)	150 ml pure isopropanol
	15 ml 10%Triton X-100

Adjust the volume to 1 liter with distilled water

Wash buffer (Buffer QC)

1.0 M NaCl	58.44 g NaCl
50 mM MOPS	10.46 g MOPS
15% isopropanol (v/v)	pH 7.0 (NaOH)
	150 ml pure isopropanol

Adjust the volume to 1 liter with distilled water

Elution buffer (Buffer QF)

1.25 M NaCl	73.05 g NaCl
50 mM Tris-Cl	6.06 g Tris base
15% isopropanol (v/v)	pH 7.0 (HCl)

Adjust the volume to 1 liter with distilled water

Reagent for southern blot and hybridization

Denaturing solution

1.5 M NaCl	87.6 g NaCl
0.5 M NaOH	20 g NaOH

Adjust the volume to 1 liter with distilled water

Neutralized solution

1.5 M NaCl	87.6 g NaCl
0.5 M Tris-base	60.57 g Tris-base
	pH 7.5 (HCl)

Adjust the volume to 1 liter with distilled water

20X SSC

0.3 M $Na_3Citrate$	98.0 g $Na_3Citrate$
3.0 M NaCl	175.32 g NaCl

Adjust the volume to 1 liter with distilled water

10X TBE

890 mM Tris-Base

890 mM Boric Acid

20 mM EDTA

Adjust the volume to 1 liter with distilled water

Primary wash buffer

0.4% SDS	4 g SDS
0.5X SSC	25 ml 20X SSC

Adjust the volume to 1 liter with distilled water

Secondary wash buffer

2X SSC	100 ml 20X SSC

Adjust the volume to 1 liter with distilled water

Media

1. TYM –Medium

Tryptone	20 g
Yeast extracts	5 g
NaCl	5 g
$MgSO_4.7H_20$	2 g

Adjust the volume to 1 liter with distilled water

2. NZCYM-Medium

NZ-Amine A	10 g
Yeast extracts	5 g
Cassminoacids	1 g
NaCl	5 g
$MgSO_4.7H_2O$	2 g

Adjust the volume to 1 liter with distilled water

3. Luria Broth Medium

Tryptone	10 g
Yeast extracts	5 g
NaCl	5 g

Adjust the volume to 1 liter with distilled water

4. Luria Broth Agar plate

Tryptone	10 g
Yeast extracts	5 g
NaCl	5 g
Bacto Agar	15 g

Adjust the volume to 1 liter with distilled water

Antibiotic

Ampicillin (50 mg/ml); 0.5 g Ampicillin dissolved in 10 ml H_2O

Tetracyclin (12.5 mg/ml); 0.125 g Tetracycline dissolved in 10 ml 70% Ethanol

X-Gal (40 mg/ml); 0.4 g X-Gal dissolved in 10 ml N,N-Dimethylformamide (DMF)

IPTG (100 mM); 236 mg IPTG dissolved in 10 ml H_2O

Carbinicilin (50 mg/ml); 0.5 g Carbinicilin dissolved in 10 ml H_2O

Kanamycin (10 mg/ml); 0.1 g Kanamycin dissolved in 10 ml H_2O

All antibiotic kept at -20 °C

DNA Ladder

1. 100 bp DNA Ladder (Fermentas, Germany)
2. 1 Kb DNA Ladder (Invitrogen, USA)
3. Midrange I PFG Marker (New England Biolabs Inc. USA)

Appendix B

(S0220; GenBank accession No. L31355)

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                                                                   Exon 1
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10741 A
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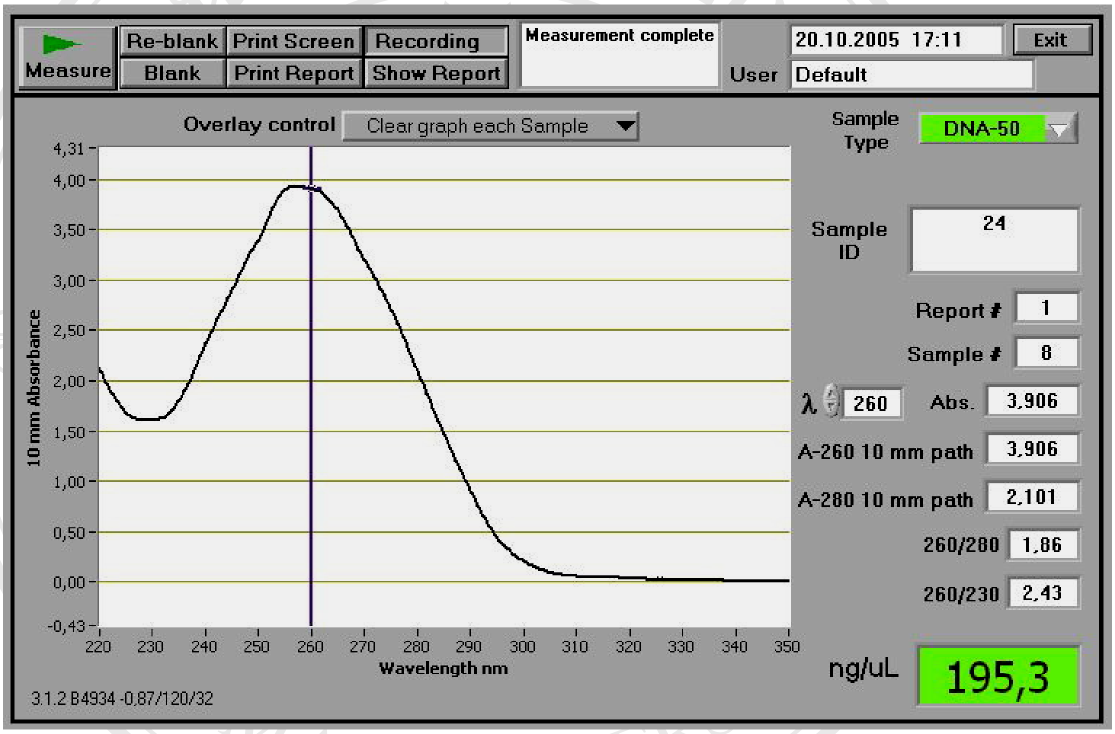
DNA quality

The ratio of sample absorbance at 260 and 280 nm is used to assess the purity of DNA. A ratio of about 1.8 is generally accepted as pure for DNA, the ratio of sample absorbance at 260 and 230 nm is a secondary measurement of nucleic acid purity. A ratio commonly in the range of 1.8-3.3 is generally values for pure nucleic acid.



PAC-Genbank (IVM PAC 714)

96-well		
ssp	sp	pp
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	2	11--20
1	3	21--30
	4	31--40
	5	41--50
	6	51--60
	7	61--70
2	8	71--80
	9	81--90
	10	91--100
	11	101--110
	12	111--120
3	13	121--130
	14	131--140
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	16	151--160
	17	161--170
4	18	171--180
	19	181--190
	20	191--200
	21	201--210
	22	211--220
5	23	221--230
	24	231--240
	25	241--250

ssp	sp	pp
	26	251--260
	27	261--270
6	28	271--280
	29	281--290
	30	291--300
	31	301--310
	32	311--320
7	33	321--330
	34	331--340
	35	341--350
	36	351--360
	37	361--370
8	38	371--380
	39	381--390
	40	391--400
	41	401--410
	42	411--420
9	43	421--430
	44	431--440
	45	441--450
	46	451--460
	47	461--470
10	48	471--480
	49	481--490
	50	491--500

ssp	sp	pp
	51	501--510
	52	511--520
11	53	521--530
	54	531--530
	55	541--550
	56	551-560

384-well		
ssp	sp	pp
	57	001--0010
	58	0011--0020
12	59	0021--0030
	60	0031--0040
	61	0041--0050
	62	0051--0060
	63	0061--0070
13	64	0071--0080
	65	0081--0090
	66	0091--0095

Genotype Data					
				Intron 1	Intron 3
Pig ID	Sex	State of affection	Breed	Genotype (CT)	Genotype (AT)
95	2	1	CB	CC	TT
926	1	1	CB	CT	TT
54	1	1	CB	CC	TT
53	2	1	CB	CC	TT
140	1	1	CB	CC	TT
TH-15	2	1	CB	CT	TT
TH-16	2	1	CB	CC	TT
TH-17	2	1	CB	CC	TT
TH-18	2	1	CB	CC	TT
TNP-1	na	1	TNP	CC	TT
TNP-2	na	1	TNP	CC	TT
TNP-3	na	1	TNP	CC	TT
TNP-4	na	1	TNP	CC	TT
TNP-5	na	1	TNP	CC	TT
WP-1	na	1	WP	CC	TT
WP-2	na	1	WP	CC	TT
WP-3	na	1	WP	CC	TT
WP-4	na	1	WP	CC	TT
WP-5	na	1	WP	CC	TT
Veltins	1	1	AS	CC	TT
Hektor	1	1	AS	CC	TT
Pier	1	1	AS	CC	TT
Vegler	1	1	Pit	CC	TT
Vulpino	1	1	Pit	CT	TT
Heftig	1	1	BB	CC	TT
Robust	1	1	Pit	CT	TT
Ass	1	1	DLS	CC	TT
Grunhagen	1	1	Pit	CT	TT
Vivaldi	1	1	Pit	CC	TT
Crestax	1	1	Pit	TT	TT
Jubel	1	1	Pit	CC	TT
Flagrant	1	1	DE	CC	TT
Fred	1	1	Pit	CT	TT
Flodder	1	1	DE	CC	TT
Taco	1	1	DE	CC	TT
Pierre	1	1	DE	CT	TT
Jaque	1	1	DE	CC	TT
Zauberer	1	1	DE	CT	TT
Michel	1	1	DE	CC	TT
Hotzenplott	1	1	SHS	CC	TT
Holgi	1	1	SHS	CT	TT
Räuber	1	1	SHS	CC	TT

Genotype Data					
				Intron 1	Intron 3
Pig ID	**Sex**	**State of affection**	**Breed**	**Genotype (CT)**	**Genotype (AT)**
Grandel	1	1	SHS	CT	TT
Orca	1	1	SHS	CT	TT
Hartmann	1	1	SHS	CT	TT
Obelix	1	1	SHS	CC	TT
Extra	1	1	DLS	CC	TT
Lotto	1	1	DLS	CC	TT
Telur	1	1	DLS	CT	TT
Lukas	1	1	DLS	CC	TT
Gaub	1	1	DLS	CT	TT
Leon	1	1	DLS	CC	TT
Orkan	1	1	DLS	CC	TT
Hacho	1	1	BB	CC	TT
Hansel	1	1	BB	CC	TT
Stummel	1	1	BB	CC	TT
Salto	1	1	BB	CC	TT
Zapfmann	1	1	Pit	CT	TT
Zampano	1	1	Pit	CC	TT
Voyeur	1	1	Pit	TT	TT
Mykro	1	1	Pit	TT	TT
EI Verraco	1	1	Pit	CT	TT
Zackig	1	1	Pit	TT	TT
Vorzug	1	1	Pit	CT	TT
Ys-18	na	1	YS	CC	TT
LC-15	na	1	LC	CC	TT
LC-16	na	1	LC	CC	TA
RC-13	na	1	RC	CC	TT
RC-14	na	1	RC	CC	TT
957	1	1	CB	CC	TT
YS25	1	1	YS	CC	TT
YS26	na	1	YS	CC	TT
YS27	na	1	YS	CC	TT
YS28	na	1	YS	CC	TT
YS29	na	1	YS	CC	TT
YS30	na	1	YS	CC	TT
JQH25	na	1	JQH	CC	TT
JQH26	na	1	JQH	CT	TT
JQH27	na	1	JQH	CT	TT
JQH28	na	1	JQH	CC	TT
JQH29	na	1	JQH	CC	TT
JQH30	na	1	JQH	TT	TT
RC19	na	1	RC	CC	TT

Genotype Data					
				Intron 1	**Intron 3**
Pig ID	**Sex**	**State of affection**	**Breed**	**Genotype (CT)**	**Genotype (AT)**
RC27	na	1	RC	CC	TT
RC28	na	1	RC	CC	TT
RC29	na	1	RC	CC	TT
RC30	na	1	RC	CC	TT
LC19	na	1	LC	CC	TT
LC21	na	1	LC	CC	TT
LC22	na	1	LC	CC	TT
LC23	na	1	LC	CC	TT
LC24	na	1	LC	CC	TA
LC26	na	1	LC	CC	TA
LC27	na	1	LC	CC	TA
LC28	na	1	LC	CC	TT
LC29	na	1	LC	CC	TT
LC30	na	1	LC	CC	AA
Gustav	1	1	AS	CC	TT
Pescal	1	1	AS	CC	TA
Garfeld	1	1	AS	CT	TT
Sokrates	1	1	AS	CC	TT
TH-5	***1***	***2***	HIP	CC	TT
TH-9	***1***	***2***	HIP	CT	TT
TH-10	***1***	***2***	HIP	CC	TT
TH-23	***1***	***2***	HIP	CC	TT
55	***1***	***2***	HIP	CC	TT
141	***1***	***2***	HIP	CC	TT
97	***1***	***2***	HIP	CC	TT
939	***1***	***2***	HIP	CC	TT
936	***1***	***2***	HIP	CC	TT
1307	***1***	***2***	HIP	CT	TT
1601	***1***	***2***	HIP	CT	TT
1309	***1***	***2***	HIP	TT	TT
1312	***1***	***2***	HIP	CT	TT
1314	***1***	***2***	HIP	TT	TT
1291	***1***	***2***	HIP	CC	TT
1294	***1***	***2***	HIP	CC	TT
1372	***1***	***2***	HIP	CC	TT
925	***1***	***2***	HIP	TT	TT
967	***1***	***2***	HIP	TT	TT
1286	***1***	***2***	HIP	CC	TT
1268	***1***	***2***	HIP	CT	TT
1271	***1***	***2***	HIP	CT	TT
1274	***1***	***2***	HIP	CC	TT
1277	***1***	***2***	HIP	CC	TT

Genotype Data					
				Intron 1	**Intron 3**
Pig ID	**Sex**	**State of affection**	**Breed**	**Genotype (CT)**	**Genotype (AT)**
1280	***1***	***2***	HIP	CT	TT
1300	***1***	***2***	HIP	CC	TT
1303	***1***	***2***	HIP	CT	TT
1382	***1***	***2***	HIP	CT	TT
1388	***1***	***2***	HIP	TT	TT
1402	***1***	***2***	HIP	TT	TT
1391	***1***	***2***	HIP	CC	TT
1389	***1***	***2***	HIP	CC	TT
1408	***1***	***2***	HIP	CC	TT
1411	***1***	***2***	HIP	TT	TT
1429	***1***	***2***	HIP	CC	TT
1433	***1***	***2***	HIP	CT	TT
1516	***1***	***2***	HIP	CC	TT

HIP = Hernia inguinalis piglets
TNP= Thai Native Pig
WP= Thai Wild Pig
AS= Angler Saddleback
Pit= Pietrain
DLS= German Landrasse
DE= German Edelschwein
SHS= Swabian- Haellian swine
BB= Bunte Bentheimer
YS= Yushanhei
LC = Luchuan
RC = Rongehang
JQH = Jiangquhar
CB= Cross bred
Sex; 1= Male, 2= Female
State of affection; 1=Normal, 2=Hernia

CURRICULUM VITAE

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1988-1993	Primary School (Bandon School, Chiang Rai, Thailand)
1994-1996	Middle School (Donsila-phangam Vitayakom, Chiang Rai, Thailand)
1997-1999	High School (Chiang Rai Vitayakom, Chiangrai, Thailand), GPA: 3.03
2000-2003	Bachelor of Science, Department of Animal Science, Agricultural Faculty, Chiang Mai University, GPA: 2.83
2006	Master of Science, Department of Animal Science, Agricultural Faculty, Chiang Mai University, GPA: 3.80

EXPERIENCES

Mach, 2002	Job Training at Poultry Framing, C.P. Group, Thailand
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February, 2004	Research work in topic “Digestibility of Nutrients in Growing Pigs Fed Diets Supplemented with Clove and Citronella Oil”
July, 2005	Research work in topic “Effect of Radio Frequency Technique on Chemicals Composition and Destruction of Trypsin Inhibitor in Soybean”
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Publication

C. Knorr, J. Beck, C. Beuermann, K. Chen, N. Ding, K. Gatphayak, L.S. Huang, **W. Laenoi** and B. Brenig. 2006. Chromosomal assignment of porcine oncogenic and apoptopic genes (CACNA2D2, TUSC4, ATP2A1, COL1A1, TAC1, BAK1, and CASP9). *Animal Genetics.* (in press)

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Vearasilp T., **W. Laenoi**, S. Vearasilp, N. Krittigamas, W. Lücke, E. Pawelzik and U. ter Meulen. 2005. Effect of Radio Frequency Technique on Nutrient Quality and Destruction of Trypsin Inhibitor in Soybean. 2005. *Tropentag 2005*, October 11-13, 2005. University of Hohenheim, Stuttgart, Germany.

SCHOLARSHIP:

2000	Faculty of Agriculture, Chiang Mai University, Thailand
2002	Department of Animal Science, Faculty of Agriculture, Chiang Mai University, Thailand
2005	The German Academic Exchange Service (DAAD) Subject related partnership between the Universities of Göttingen (Germany) and Chiang Mai (Thailand) in the area of academic co-operation in teaching and research mainly in the field of agriculture in the tropics”