

**Table 1.** List of bacterial strains used in this study.

<b>Bacteria</b>	<b>Comments<sup>d</sup></b>
<i>S. pseudintermedius</i> strain <sup>a</sup> :	
VDTSP1	Isolated from a 12 y.o. spayed female Miniature dachshund dog.
VDTSP2	Isolated from a 3 y.o. contraceptive female toy Poodle dog.
VDTSP3	Isolated from a 13 y.o. contraceptive female Border collie dog.
VDTSP4	Isolated from an 8 y.o. contraceptive female miniature Dachshund dog.
VDTSP5	Isolated from an 8 y.o. French bulldog with unknown gender.
VDTSP6	Isolated from a 13 y.o. male Labrador retriever dog.
VDTSP7	Isolated from a 7 y.o. castrated male Papillon dog.
VDTSP8	Isolated from a 5 y.o. French bulldog dog with unknown gender.
VDT2SP1 to VDT2SP45	These 45 strains were isolated from the affected skin sites in pyoderma or AD.
<i>E. coli</i> strain:	
DH5 $\alpha$ <sup>b</sup>	Used for cloning.
NiCo21 (DE3) <sup>c</sup>	Used for protein expression.

<sup>a</sup>, These bacteria strains were isolated in this study.

<sup>b</sup>, The bacteria were purchased from Takara Bio (Shiga, Japan).

<sup>c</sup>, The bacteria were purchased from New England Biolabs (Ipswich, MA, USA).

<sup>d</sup>, y.o., years old.

**Table 2.** List of primers used in this study.

Primer	Sequence (5' to 3')	Comment
tuf forward	CAATGCCACAAACTCG	These primers were used for bacterial phylogenetic analysis, which are generally used for multilocus sequence typing analysis in <i>S. pseudintermedius</i> .
tuf reverse	GCTTCAGCGTAGTCTA	
cpn60 forward	GCGACTGTACTTGCACAAGCA	
cpn60 reverse	AACTGCAACCGCTGTAAATG	
pta forward	GTGCGTATCGTATTACCAGAAGG	
pta reverse	GCAGAACCTTTTGTGAGAAGC	
purA forward	GATTACTTCCAAGGTATGTTT	
purA reverse	TCGATAGAGTTAATAGATAAGTC	
fdh forward	TGCGATAACAGGATGTGCTT	
fdh reverse	CTTCTCATGATTCACCGGC	
ack forward	CACCACTTCACAACCCAGCAAACCT	
ack reverse	AACCTTCTAATACACGCGCACGCA	
sar forward	GGATTTAGTCCAGTTCAAAATTT	
sar reverse	GAACCATTGCCCCATGAA	
DM13_F	TTAAGGTACCATGAACATGAAAATGGCATTAGTTTC	Primers were used for cloning of the gene for DM13-domain containing protein.
DM13_R	TCATGAATTCCTATTTAAGTTCCGCAGAACCAAA	
ImDoAgB_F	TTAAGGTACCATGAATCAAGTTACAAAAATTGCAATCG	Primers were used for cloning of the gene for immunodominant B antigen.
ImDoAgB_R	TCATGAATTCCTAACGACTCTTTTTGCTTTAATC	
DM13_SQ_F	GAATTATTAATGAGTAGTTTATGTTAATTGCTGT	Primers were used to detect the gene for DM13-domain containing protein in <i>S. pseudintermedius</i> .
DM13_SQ_R	GGATATAAAAACCTGATCCTAAGCG	

**Table 3.** IgE reactivities specific to eight *S. pseudintermedius* strains.

<i>S. pseudintermedius</i> strain	Positivity rate (%)
VDTSP1	61.7
VDTSP2	63.1
VDTSP3	9.9
VDTSP4	63.1
VDTSP5	9.9
VDTSP6	56.7
VDTSP7	44.0
VDTSP8	53.2