SUPPLEMENTAL DATA

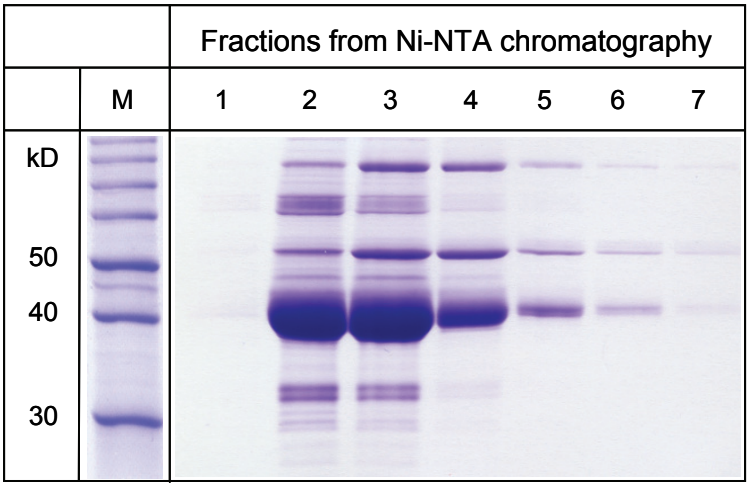

Figure S1. SDS-PAGE analysis with Coomassie staining of *Pa*IDS1 recombinant protein expressed in *E. coli* and partially purified. The bacterial extract was subjected to Ni-NTA agarose chromatography with 250 mM imidazole in the assay buffer as eluant. Fractions of 1.5 ml were obtained and fraction number two was assayed to study *Pa*IDS1 activity. *M*, molecular mass markers.

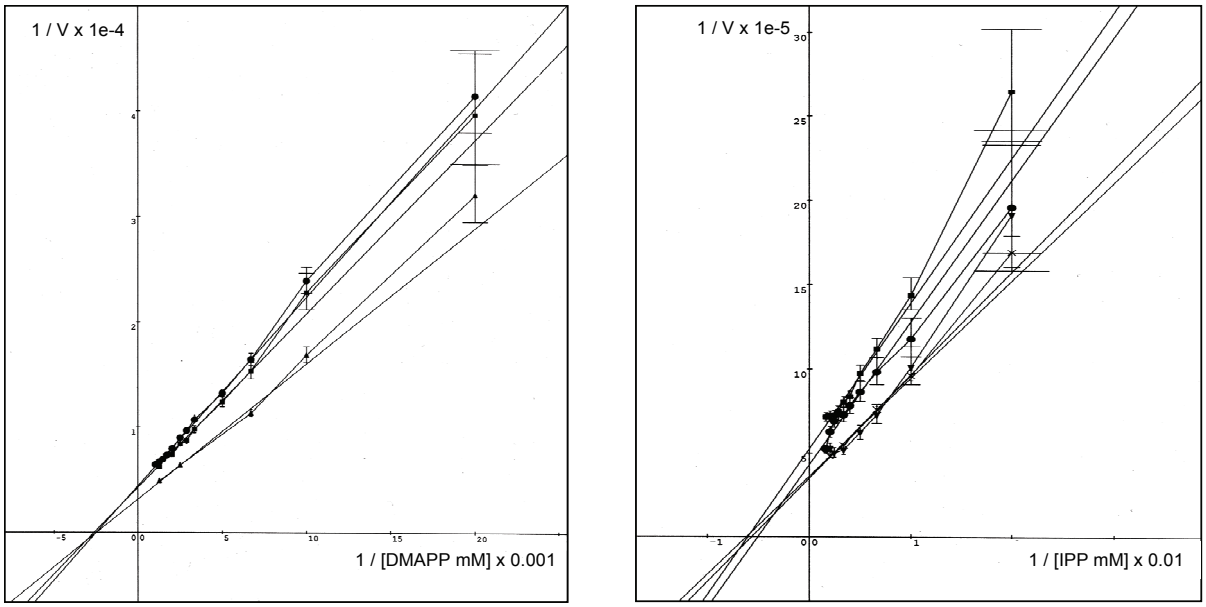

Figure S2. Lineweaver-Burk plots of partly purified recombinant *Pa*IDS1 protein expressed in *E. coli* for determination of K_m and V_{max} for DMAPP and IPP. Kinetic parameters were calculated assuming Michaelis-Menten kinetics by using the program EkI.

Table SI. Sequences of primers used for the side directed mutagenesis approach including the melting temperature and the position of the changed amino acids. The numbers of mutations are listed in the text.

Oligonucleotide	Sequence (5'-3')	T_m (in°C)	Mutation
IDS1-I/M-173for	GCCAACTGCCTGTGCAATGGAAATGATCCA CACAATGTCTTTG	73.3	I161M
IDS1-P/C-186for	CTTTGATTCATGATGACTTGCCTTGCATGG ACAATGATGATTTACGCCG	73.6	P174C
IDS1-L/F-192for	GCCTCCCATGGACAATGATGATTTTTCGCC GAGGTAAGCCTACAAACC	76.3	L180F
IDS1-P/S-186for	CTTTGATTCATGATGACTTGCCTTCCATGG ACAATGATGATTTACGCCG	73.2	P174S
IDS1-P/L-198for	GATTTACGCCGAGGTAAGCTTACAAACCAC AAGGTCTTCGG	73.4	P185L
IDS1_M/C_165for	GTGCAATGGAAATTATCCACACATGCTCTT TGATTCATGATGACTTGCC	72.8	M165C
IDS1_M/Y_165for	GTGCAATGGAAATTATCCACACATACTCTT TGATTCATGATGACTTGCC	71.9	M165Y
IDS1_M/I_175for	GATTCATGATGACTTGCCTCCCATCGACAA TGATGATTTACGC	72.3	M175I
IDS1-M/I_159for	GCCTGTGCAGTCGAAATTATCCACACAATG TC	68.2	M159I
IDS1-V/L_240for	GGCTCGGAAGGGCTTGCAGGTGGGCAGG	>75	V240L
IDS1-V/M_227for	GGGTTTTGAGGATGGTATCTGAATTGGG	71.5	V227M
IDS1-I/T_235for	GGGTAGAGCAACAGGCTCGGAAGGGG	72.1	I235T
IDS1-L/F_273for	GCAGTGCTCTTCGAGTGCTCCG	72.2	L273F
Del-PP_for	CCACACAATGTCTTTGATTCATGATGACTT GATGGACAATGATGATTTACGCCGAGG	>75	deletion of P173 + P174
IDS1_P/C_M/I_for	CATGATGACTTGCCTTGCATCGACAATGAT GATTTACGC	70.5	P174C + M175I
IDS1-P/C_L/F_for	GCCTTGCATGGACAATGATGATTTCCGCCG AGGTAAGCC	74.7	P174C + L180F
IDS1_P/C_G/D_for	GGGAATCCTTCTGTTGGCCTTGACACTCTG GAATGGATTCAC	74.3	P174C + G257D
IDS1_P/S_M/I_for	CATGATGACTTGCCTTCGATCGACAATGAT GATTTACGC	70.5	P174S + M175I

Table SII. Sequences of primers used for the construction of chimeric IDS including their melting temperature. The numbers of chimeras are listed in the text.

Oligonucleotide	Sequence (5'-3')	T_m (in°C)	Chimera
IDS1-BanII_rev	CACCCACGAGCCCTTCCGAGCCTATTGCTCTACCC	>75	*Pa*IDS5-1
IDS1-BssSI_rev	GTTCTGCTCGTGGACACTGCAATGTGCTCAAATGC	71.8	*Pa*IDS2-1
IDS1 (BanII)_for	GGGCTCTGCAGGTGGGCAGGTTGC	71.3	*Pa*IDS1-5
IDS1-BssSI_for	CAGTCTCCACGAGCAAGACTGTGGAGTCTGATAGGG	74	*Pa*IDS1-2
IDS5-BanII_for	GTGTCCACAAGCAAAAGTGTGGG	62.4	*Pa*IDS5-1
IDS2-BssSI_for	GGAGGATACTGCTATTATTGCAGG	61.0	*Pa*IDS2-1
IDS5(BanII)_rev	CCACCCACGAGCCCTTGAGAG	65.7	*Pa*IDS1-5
IDS2-BssSI_rev	CAACCTGGCCACCCATAACC	61.4	*Pa*IDS1-2