

**Table 2. Peroxisomal matrix proteins of higher plants, mammals, and yeasts with the targeting signal PTS2 within the N terminus**

Plants and mammals			
Enzyme/species	N-terminal presequence	Cleavage site*	Mature subunit
<u>Malate dehydrogenase</u>			
Watermelon	MQP IPDVN <b>QRIARIS</b> AHLHPPK <b>SQMEESSALRRAN</b> <u>CR</u> * - AKGGAPGFKVAI		
Pumpkin	MKP IPDVNER <b>RIARIS</b> AHLHPPK <b>SQMEEGSVLRRAN</b> <u>CR</u> * - AKGGAPGFRVAI		
Alfalfa	MEPN <b>SYANSRITRIAS</b> HLNPPNLKMNEHGSSLTNVH <u>CR</u> * - AKGGTPGFKVAI		
Rice	MEDAAAAAR <b>MERLASH</b> LPPASQMEESP <b>LLRGSN</b> <u>CR</u> * - AKGAAPGFKVAI		
Rape	MPHK <b>RIAMISA</b> HLQPSFT <b>PQMEAKNSVMGLE</b> <u>SC</u> * - AKGGNP <b>GFKVAI</b>		
<i>Arabidopsis</i> (At5g09660)	MEFRGDAN <b>QRIARIS</b> AHLTPQMEAKNSVIGREN <u>CR</u> * - AKGGNP <b>GFKVAI</b>		
<i>Arabidopsis</i> (At2g22780)	MPDN <b>QRIARIS</b> AHLNPPNLHNQIADG <b>SGLNRVA</b> <u>CR</u> * - AKGGSP <b>GFKVAI</b>		
<u>Citrate synthase</u>			
Pumpkin	MPTD <b>MELSPSNVARHRLAVL</b> AAHLSAASLEPPVMAS <b>SLEAH</b> <u>CV</u> * - SAQTMV <b>APPEL</b>		
<i>Arabidopsis</i> (At2g42790)	MEI <b>SERV</b> RAR <b>LAVLSGHL</b> SEGKQDSPA <b>IERW</b> <u>CT</u> * - SADTSV <b>APLGS</b>		
<i>Arabidopsis</i> (At3g58740)	MEI <b>SER</b> ARAR <b>LAVLNAHL</b> TVSEPNQV <b>LP</b> AI <b>EPW</b> <u>CT</u> * - SAHIT <b>AAPHGS</b>		
<u>Acyl CoA oxidase</u>			
Pumpkin	MAS <b>P</b> GEPNRTAEDESQAAAR <b>RIERLSLHL</b> TP <b>IPL</b> DD <b>SQGVEMET</b> <u>C</u> * - AAGKAKAK <b>IEVD</b>		
<i>Arabidopsis</i> (At5g65110)	MESRREKN <b>PMTEEESDGLIAARRIQRLSLHL</b> SPSLT <b>LSP</b> SL <b>PLVQ</b> T <b>ET</b> <u>C</u> * - S <b>ARSKKLDVNGE</b>		
<u>3-keto-acyl-CoA thiolase</u>			
Cucumber	MEKAIN <b>RQ</b> S <b>ILLHHL</b> RPSSSAYTNESSLSAS <b>V</b> <u>C</u> * - AAGDS <b>SASY</b>		
Pumpkin	MEKAIN <b>RQ</b> S <b>ILLHHL</b> RPSSSAYSHESSLSAS <b>V</b> <u>C</u> * - AAGDS <b>SASY</b>		
Mango	MEKAIN <b>RQ</b> S <b>ILLHHL</b> RPSSSSSHNYESALAAS <b>V</b> <u>C</u> * - AAGDS <b>SAAY</b>		
Rape	MEKAMER <b>Q</b> R <b>V</b> LL <b>EH</b> LRPSSSSSHSFE <b>GSLSAS</b> A <b>C</b> <u>*</u> - LAGDS <b>SAAY</b>		
<i>Arabidopsis</i> (At5g48880)	MEKAI <b>ERQ</b> R <b>V</b> LL <b>EH</b> LRPSSSSSHNYEASLSAS <b>A</b> <u>C</u> * - LAGDS <b>SAAY</b>		
Rat	MESVGR <b>TSAMHRLQ</b> V <b>VLGHL</b> LAGRP <b>ESS</b> SALQAA <b>P</b> <u>C</u> * - SAGFP <b>QAS</b>		
Human	M <b>Q</b> R <b>LQ</b> V <b>VLGHL</b> LRGPADSGW <b>MPQAAP</b> <u>C</u> * - LSGAP <b>QAS</b>		
<u>Phytanoyl-CoA2-hydroxylase</u>			
Rat	MDYTRAG <b>ARLQ</b> V <b>LLGHL</b> GRPSALQ <b>I</b> VAHPVSGPASPAN <b>F</b> <u>C</u> * - PEQ <b>FQYTL</b>		
<u>Alkylidihydroxyacetone phosphate synthase</u>			
Human	MAEAAAAAGGTGLGAGASYGSAADRDRDPDPDRAGR <b>RLRVLSGHL</b> LGRP <b>REAL</b> STNE <b>C</b> <u>*</u> - KARRA <b>ASA</b>		
Rat	MAEAAAGEAGASERDPDAVRARR <b>RLRVLSGHL</b> LGRP <b>QEAP</b> STNE <b>C</b> <u>*</u> - KARRA <b>ASA</b>		
Mouse	MAEAAAGEAGASERDPDAGRARR <b>RLRVLSGHL</b> LGRP <b>QEAP</b> STNE <b>C</b> <u>*</u> - KARRA <b>ASA</b>		
Yeasts			
<u>3-keto-acyl-CoA thiolase</u>			
<i>S. cerevisiae</i>	MS <b>Q</b> R <b>LQ</b> S <b>IKDHL</b> VLSAMGLGESKRKNS <b>LLEK</b>		
<i>C. tropicalis</i>	MD <b>RLNQLSGQL</b> KPN <b>AQ</b> SILQKNPDD <b>VVIV</b>		
<i>Y. lipolytica</i>	MD <b>RLNNL</b> AT <b>QLE</b> QNP <b>AKGLDAIT</b> SKNPDD <b>V</b>		
<u>Amine oxidase</u>			
<i>H. poymorpha</i>	M <b>ERLRQIASQA</b> TAA <b>SAAPARPAHPLDPLST</b>		

The PTS2 is indicated in bold. The conserved Cys near the cleavage site for the peroxisomal processing peptidase in higher eukaryotes is indicated in bold and underlined (see ref. 2).