Active Recombinant Human Peptidylglycine Alpha-Amidating Monooxygenase, His-tagged

Cat. No. PAM-495H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PAMis expressed in Murine myeloma cell line, which has a molecule weight of 90 kDa. Met1 Val817, with a Cterminal 10His tag.
Species	Human
Source	Mammalian Cells
Description	Pedptidylglycine αAmidatingMonooxygenase (PAM) catalyzes the Cterminal amidatio n that is required for thefunction of a number of peptide hormones. PAM possesses t wo enzymatic activitieson a single polypeptide chain, due to the presense of a peptidy lglycine αhydroxylatingmonooxygenase (PHM) domain and a peptidylαhydroxyglycine αamidating lyase (PAL)domain. The Cterminal glycines of precursor peptides are hyd roxylated at theglycine α carbon by the PHM activity in a reaction that requires ascorb ate, thenthe PAL activity completes the amidation, releasing glyoxylate in the proces s.PAM is required for the biosynthesis of peptides such as Substance P, neuropeptid eY, oxytocin, vasopressin, and calcitonin. PAM is highly expressed in tissues thatsynt hesize bioactive peptides, such as the thyroid and pituitary glands. The enzymeis gen erally stored in secretory granules, but soluble secreted forms have beenobserved. R ecombinant human PAM was expressed as a Cterminally truncated proteinlacking its transmembrane and cytosolic domains to facilitate its secretion.
Form	Lyophilized from a 0.2μm filtered solution in Tris and NaCl.

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N-terminal Sequence	Phe21
Molecular Weight	90 kDa
Activity	Measured by the conversionof DTyrValGly to DTyrValNH2. The specific activity is > 350 pmol/min/µg,as measured under the described conditions. See Activity Assay Protocol.
Purity	>95%, by SDSPAGEunder reducing conditions and visualized by Colloidal Coomassie® Blue stain at5 µg per lane.
Endotoxin Level	<1.0 EU per 1 µg ofthe protein by the LAL method.
Storage	Use a manual defrostfreezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt,70 °C as supplied. 3 months, 70 °C under sterile conditions after opening.
OfficialSymbol	PAM

GENE INFORMATION

Gene Name	PAM peptidylglycine alpha-amidatingmonooxygenase [Homo sapiens]
Synonyms	PAM; peptidylglycinealpha-amidating monooxygenase; PAL; PHM; peptidyl-glycine alpha-amidating monooxygenase;peptidylamidoglycolate lyase; peptidylglycine 2-hydroxylase; peptidyl alpha-amidatingenzyme; peptidylglycine alpha-hydroxylating monooxygenase; peptidyl-alpha-hydroxyglycinealpha-amidating lyase; pancreatic peptidylglycine alpha-amidating monooxygenase;EC 1.14.17.3; EC 4.3.2.5; OTTHUMP00000158920; OTTHUMP00000158921; OTTHUMP00000158922;OTTHUMP00000158923; OTTHUMP00000222752; OTTHUMP00000227957

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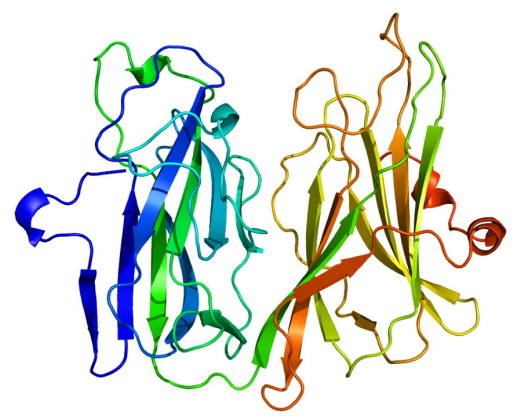
Gene ID	5066
mRNA Refseq	NM_000919
Protein Refseq	NP_000910
MIM	170270
UniProt ID	P19021
Chromosome Location	5q14-q21
Function	L-ascorbic acid binding;copper ion binding; lyase activity; metal ion binding; peptidylamidoglycolatelyase activity; peptidylglycine monooxygenase activity; protein binding
PDB rendering based on1opm.	

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