

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

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

SPECIFICATION

Product Overview	Recombinant Human PAM is 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	Peptidylglycine α-amidating monooxygenase (PAM) catalyzes the Cterminal amidation that is required for the function of a number of peptide hormones. PAM possesses two enzymatic activities on a single polypeptide chain, due to the presence of a peptidylglycine α-hydroxylating monooxygenase (PHM) domain and a peptidylglycine α-amidating lyase (PAL) domain. The Cterminal glycines of precursor peptides are hydroxylated at the glycine α carbon by the PHM activity in a reaction that requires ascorbate, then the PAL activity completes the amidation, releasing glyoxylate in the process. PAM is required for the biosynthesis of peptides such as Substance P, neuropeptide Y, oxytocin, vasopressin, and calcitonin. PAM is highly expressed in tissues that synthesize bioactive peptides, such as the thyroid and pituitary glands. The enzyme is generally stored in secretory granules, but soluble secreted forms have been observed. Recombinant human PAM was expressed as a Cterminally truncated protein lacking its transmembrane and cytosolic domains to facilitate its secretion.
Form	Lyophilized from a 0.2 μ m filtered solution in Tris and NaCl.

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N-terminal Sequence	Phe21
Molecular Weight	90 kDa
Activity	Measured by the conversion of DTyrValGly to DTyrValNH ₂ . The specific activity is > 350 pmol/min/μg, as measured under the described conditions. See Activity Assay Protocol.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain at 5 μg per lane.
Endotoxin Level	<1.0 EU per 1 μg of the protein by the LAL method.
Storage	Use a manual defrost freezer 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.
Official Symbol	PAM

GENE INFORMATION

Gene Name	PAM peptidylglycine alpha-amidating monooxygenase [Homo sapiens]
Synonyms	PAM; peptidylglycine alpha-amidating monooxygenase; PAL; PHM; peptidyl-glycine alpha-amidating monooxygenase; peptidylamidoglycolate lyase; peptidylglycine 2-hydroxylase; peptidyl alpha-amidating enzyme; peptidylglycine alpha-hydroxylating monooxygenase; peptidyl-alpha-hydroxyglycine alpha-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; peptidylamidoglycolate lyase activity; peptidylglycine monooxygenase activity; protein binding
PDB rendering based on 1opm.	