Goat Anti-PAM / PAL Antibody
Peptide-affinity purified goat antibody
Catalog # AF1782a

Specification

Goat Anti-PAM / PAL Antibody - Product Information

Application	**WB**
Primary Accession	P19021
Other Accession	NP_620177, 5066
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**108332**

Goat Anti-PAM / PAL Antibody - Additional Information

Gene ID 5066

Other Names
Peptidyl-glycine alpha-amidating monooxygenase, PAM, Peptidylglycine alpha-hydroxylating monooxygenase, PHM, 1.14.17.3, Peptidyl-alpha-hydroxyglycine alpha-amidating lyase, 4.3.2.5, Peptidylamidoglycolate lyase, PAL, PAM

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PAM / PAL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PAM / PAL Antibody - Protein Information

Name PAM {ECO:0000303|PubMed:12699694, ECO:0000312|HGNC:HGNC:8596}

Function
Bifunctional enzyme that catalyzes the post-translational modification of inactive peptidylglycine precursors to the corresponding bioactive alpha-amidated peptides, a terminal modification in biosynthesis of many neural and endocrine peptides (PubMed:12699694). Alpha-amidation involves two sequential reactions, both of which are catalyzed by separate

catalytic domains of the enzyme. The first step, catalyzed by peptidyl alpha-hydroxylating monooxygenase (PHM) domain, is the copper-, ascorbate-, and O2- dependent stereospecific hydroxylation (with S stereochemistry) at the alpha-carbon (C-alpha) of the C-terminal glycine of the peptidylglycine substrate (PubMed:12699694). The second step, catalyzed by the peptidylglycine amidoglycolate lyase (PAL) domain, is the zinc- dependent cleavage of the N-C-alpha bond, producing the alpha-amidated peptide and glyoxylate (PubMed:12699694). Similarly, catalyzes the two- step conversion of an N-fatty acylglycine to a primary fatty acid amide and glyoxylate (By similarity).

Cellular Location

Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:P10731}; Single-pass membrane protein {ECO:0000250|UniProtKB:P10731}. Note=Secretory granules {ECO:0000250|UniProtKB:P10731} [Isoform 2]: Membrane; Single-pass type I membrane protein [Isoform 4]: Secreted. Note=Secreted from secretory granules

Goat Anti-PAM / PAL Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-PAM / PAL Antibody - Images

AF1782a (1 µg/ml) staining of Human Kidney lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-PAM / PAL Antibody - Background

This gene encodes a multifunctional protein. It has two enzymatically active domains with catalytic activities - peptidylglycine alpha-hydroxylating monooxygenase (PHM) and peptidyl-alpha-hydroxyglycine alpha-amidating lyase (PAL). These catalytic domains work sequentially to catalyze neuroendocrine peptides to active alpha-amidated products. Multiple

alternatively spliced transcript variants encoding different isoforms have been described for this gene but some of their full length sequences are not yet known.

Goat Anti-PAM / PAL Antibody - References

E3 ligases Arf-bp1 and Pam mediate lithium-stimulated degradation of the circadian heme receptor Rev-erb alpha. Yin L, et al. Proc Natl Acad Sci U S A, 2010 Jun 22. PMID 20534529.
Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.
Poor replication of candidate genes for major depressive disorder using genome-wide association data. Bosker FJ, et al. Mol Psychiatry, 2010 Mar 30. PMID 20351714.
The peptidylglycine alpha-amidating monooxygenase (PAM): a novel prodrug strategy for amidoximes and N-hydroxyguanidines? Schade D, et al. ChemMedChem, 2009 Oct. PMID 19693765.
Common variants conferring risk of schizophrenia. Stefansson H, et al. Nature, 2009 Aug 6. PMID 19571808.