10320 Camino Santa Fe, Suite G
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PAM/Peptidylglycine 2 hydroxylase Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57819

Specification

PAM/Peptidylglycine 2 hydroxylase Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC**
Primary Accession	P19021
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**108 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human PAM/Peptidylglycine 2 hydroxylase**
Epitope Specificity	**41-140/973**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Membrane and Secreted. Secreted from secretory granules.**
SIMILARITY	**In the C-terminal section; belongs to the peptidyl-alpha-hydroxyglycine alpha-amidating lyase family. In the N-terminal section; belongs to the copper type II ascorbate-dependent monooxygenase family. Contains 5 NHL repeats.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
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. [provided by RefSeq, Jul 2008]

PAM/Peptidylglycine 2 hydroxylase Polyclonal 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 {ECO:0000303|PubMed:12699694, ECO:0000312|HGNC:HGNC:8596}

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

PAM/Peptidylglycine 2 hydroxylase Polyclonal Antibody - Protein Information

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

Function
Bifunctional enzyme that catalyzes amidation of the C- terminus of proteins (PubMed:12699694, PubMed:2357221). Alpha-amidation is present at the C-terminus of many endocrine hormones and neuropeptides and is required for their activity (PubMed:1575450). C- terminal amidation also takes place in response to protein fragmentation triggered by oxidative stress, promoting degradation of amidated protein fragments by the proteasome (PubMed:2207077). Alpha- amidation involves two sequential reactions, both of which are catalyzed by separate catalytic domains of the enzyme (PubMed:12699694). 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

PAM/Peptidylglycine 2 hydroxylase Polyclonal Antibody - Protocols

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

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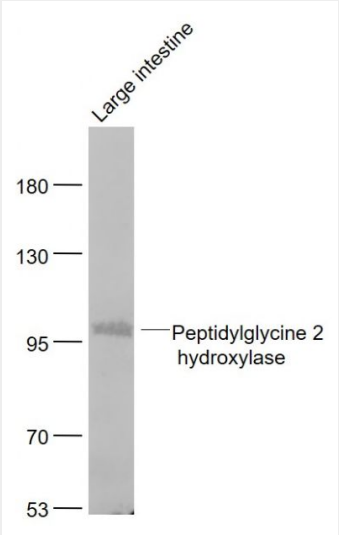
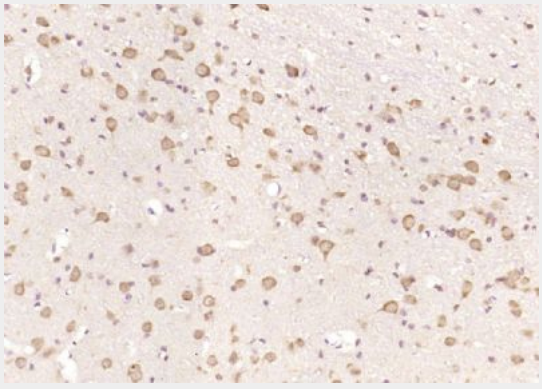
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PAM/Peptidylglycine 2 hydroxylase Polyclonal Antibody - Images



Sample:
Large intestine (Mouse) Lysate at 40 ug
Primary: Anti- PAM/Peptidylglycine 2 hydroxylase (bs-21009R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 108 kD
Observed band size: 108 kD



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PAM Peptidylglycine 2 hydroxylase) Polyclonal Antibody, Unconjugated (bs-21009R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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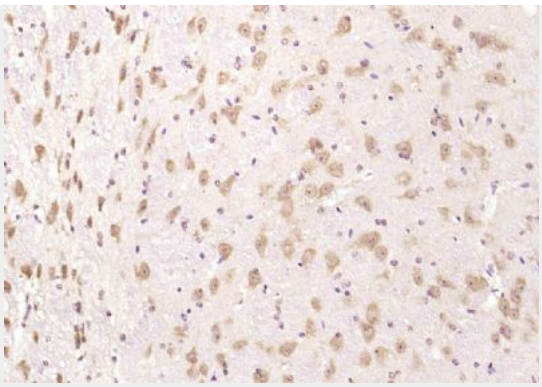

Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PAM Peptidylglycine 2 hydroxylase) Polyclonal Antibody, Unconjugated (bs-21009R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.