

## Active Peptidylglycine Alpha Amidating Monooxygenase (PAM)

Catalog No.: TP09174

50µg

### Sequence Information

**Species:** Human

**Gene ID:**5066

**Swiss Prot:**P19021

**Synonyms:**PAL; PHM; Peptidylamidoglycolate  
lyase; Peptidyl-Alpha-hydroxyglycine  
Alpha-amidating Lyase; Peptidylglycine  
Alpha-Hydroxylating Monooxygenase

**Residues:**Phe21~Cys288

FRSPLSVFKRKFETTRPFSNECLGTTRPVVPIDSSDFALDIRMPGVTPKQSDTY  
FCMSMRIPVDEEAFVIDFKPRASMDTVHHMLLFGCNMPSSSTGSYWFCDEGTCTD  
KANILYAWARNAPPTRLPGKGVGFRVGGETGSKYFVLQVHYGDISAFRDNNKDCS  
GVSLHLTRLPQPLIAGMYLMMSVDTVIPAGEKVVNSDISCHYKNYPMHVFAYRV  
HTHHLGKVVSgyrvrNgQwTLIGRQSPQLPQAFYPVGHPVDVSFGDLLAARC

### Product Information

**Source:** Recombinant expression.

**Host:** *E.coli*

**Tags:** N-terminal His-Tag

**Subcellular Location:** Secreted

**Purity:** >90%

**Traits:** Freeze-dried powder

**Buffer formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose

**Original Concentration:** 200µg/mL

**Applications:** Positive Control; Immunogen; SDS-PAGE; WB.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 8.8

**Predicted Molecular Mass:** 33.7kDa

**Accurate Molecular Mass:** 34kDa as determined by SDS-PAGE reducing conditions.

### [ USAGE ]

Reconstitute in ddH<sub>2</sub>O to a concentration of 0.1-0.5 mg/mL. Do not vortex.

### [ STORAGE AND STABILITY ]

**Storage:** Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## [ ACTIVITY ]

Peptidyl-glycine alpha-amidating monooxygenase (PAM) is an enzyme that is required for the biosynthesis of many signaling peptides. This enzyme mainly includes two domains with distinct catalytic activities, a peptidylglycine alpha-hydroxylating monooxygenase (PHM) domain and a peptidyl-alpha-hydroxyglycine alpha-amidating lyase (PAL) domain. These catalytic domains work sequentially to catalyze neuroendocrine peptides to active alpha-amidated products. Besides, Glucosidase Alpha, Acid (GaA) has been identified as an interactor of PAM, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PAM and recombinant human GaA. Briefly, PAM were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to GaA-coated microtiter wells and incubated for 2h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-PAMpAb, then aspirated and washed 3 times. After incubation with HRP-labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of PAM and GaA was shown in Figure 1, and this effect was in a dose-dependent manner.

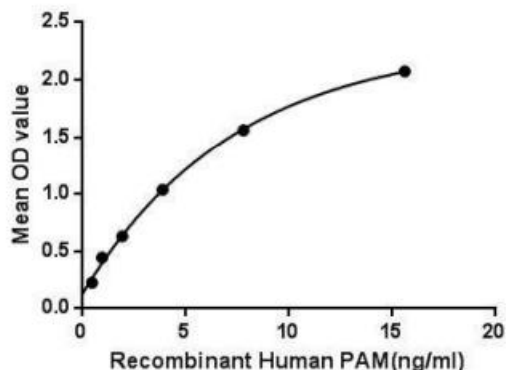
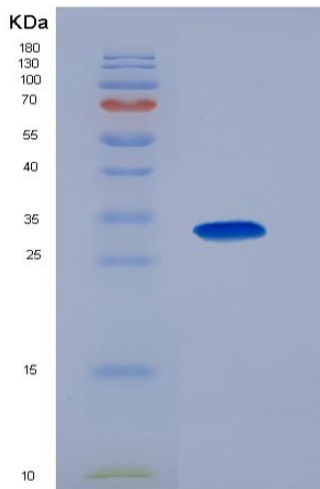


Figure 1. The binding activity of PAM with GaA.

## [ IDENTIFICATION ]



**Figure 1. SDS-PAGE**

**[ IMPORTANT NOTE ]**

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.