

Product Specification Sheet

Amylin Antibodies

Cat. # AMYL13-P	Rat Amylin Control/blocking Peptide # 3	SIZE: 100 ug
Cat. # AMYL13-S	Rabbit Anti-Rat Amylin antiserum # 3	SIZE: 100 ul
Cat. # AMYL13-A	Rabbit Anti-Rat Amylin Ig G # 3, Aff pure	SIZE: 100 ug

The calcitonin family of bioactive peptides comprises of **calcitonin**, **amylin**, two calcitonin-gene related peptides (**CGRP1**, and **CGRP2**) and adrenomedullin (**ADM**). **Amylin** is a 37-aa peptide produced in the pancreatic beta-cell secretory granules and is co-released with insulin. Amylin also has CGRP-like effects on bone metabolism. Amylin has specific binding sites in the CNS and it may regulate gastric emptying and influence carbohydrate metabolism. The calcitonin family peptides probably act through G-protein coupled membrane receptors. Recently, a homolog of calcitonin receptor, **CRLR** (calcitonin-receptor-like receptor human 461 aa; rat/mouse 463 aa) was identified. It is now shown that CRLR can function as either a CGRP receptor or an ADM receptor, depending upon which members of a new family of proteins called receptor activity modifying proteins (**RAMP1-3**) are expressed.

FUNCTION: Selectively inhibits insulin-stimulated glucose utilization and glycogen deposition in muscle, while not affecting adipocyte glucose metabolism.

SUBCELLULAR LOCATION: Secreted.

DISEASE: IAPP is the peptide subunit of amyloid found in pancreatic islets of type 2 diabetic patients and in insulinomas.

SIMILARITY: Belongs to the calcitonin family.

Protein name Islet amyloid polypeptide [Precursor]; Synonyms Amylin; Diabetes-associated peptide DAP; Insulinoma amyloid peptide ; Gene name Name: IAPP

Source of Antigen and Antibodies

Antigen	13-aa peptide of rat AMYL/AML (protein accession #P12969, refs 1); Designated (AMYL13-P or control peptide)/blocking peptide conjugated to KLH
Epitope Location	~mid-region of mature of Amylin 18-30 aa
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (# AMYL13-S) and IgG, purified over antigen-agarose (Cat # AMYL13-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The rat AMYL13-P is 100% conserved in mouse and 53% in human Amylin. The peptide has no significant sequence homology with other calcitonin family of peptides. We recommend the use of antibody# AMYL12-A for the human amylin. Antibody cross-reactivity in various species has not been studied. The AMYL112P control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site). Full length (1-37 aa) rat Amylin #AMYL17-P5 and Amylin fragment (8-37 aa) # AMYL18-P-500 are available for control studies.

General References: (1). Mosselman S et al (1989) FEBS lett. 247, 154; Nishi M et al (1989) Mol. Endocrinol. 3, 177; Sanke T et al (1988) JBC 263, 17243; Christmansson L et al (1990) FEBS lett. 267, 160; westmark P et al (1987) ONAS 86, 9662; McLatchie LM et al (1998) Nature 393, 333-339; Nagae T et al (2000) BBRC 270, 89-93; Husmann, K et al (2000); Mol Cell Endocrinol (2000) 162, 35-43.

*This product is for In vitro research use only.

AMYL13-S-A-P

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