

Amylin (H-50): sc-20936

BACKGROUND

Adrenomedullin (AM), α - and β -calcitonin gene-related peptide (CGRP), calcitonin (CT), and Amylin are homologous polypeptides with overlapping biological actions such as vasodilatation and inhibition of bone resorption. Amylin (Islet/Insulinoma amyloid polypeptide or IAPP) is a 37-amino acid monomeric polypeptide isolated from pancreatic amyloid. This protein is a major component of amyloid-rich pancreatic extracts of three type 2 diabetic patients. IAPP has cysteine residues in positions 2 and 7, a feature found in all known calcitonin gene-related peptides. IAPP shows 46% amino acid sequence homology with CGRP II. Since IAPP has been demonstrated immunochemically in normal β cells of several mammals, it probably has an important role in respect to pancreatic islet function. The gene which encodes Amylin maps to human chromosome 12p12.1.

REFERENCES

- Cooper, G.J., et al. 1987. Purification and characterization of a peptide from amyloid-rich pancreases of type 2 diabetic patients. *Proc. Natl. Acad. Sci. USA* 84: 8628-8632.
- Hoovers, J.M., et al. 1993. High-resolution chromosomal localization of the human calcitonin/CGRP/IAPP gene family members. *Genomics* 15: 525-529.
- Born, W., et al. 2002. Functional interaction of G protein-coupled receptors of the adrenomedullin peptide family with accessory receptor-activity-modifying proteins (RAMP). *Microsc. Res. Tech.* 57: 14-22.
- Tomita, T. 2003. Amylin in human pancreatic islets. *Pathology* 35: 34-36.
- Zhang, S., et al. 2003. Fibrillogenic amylin evokes islet β -cell apoptosis through linked activation of a caspase cascade and JNK1. *J. Biol. Chem.* 278: 52810-52819.

CHROMOSOMAL LOCATION

Genetic locus: IAPP (human) mapping to 12p12.1; lapp (mouse) mapping to 6 G2.

SOURCE

Amylin (H-50) is a rabbit polyclonal antibody raised against amino acids 40-89 mapping at the C-terminus of Amylin precursor of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Amylin (H-50) is recommended for detection of Amylin precursor and active peptide of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

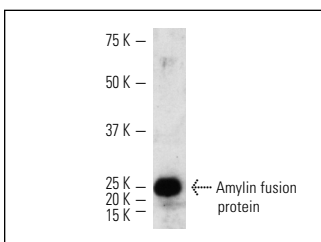
Suitable for use as control antibody for Amylin siRNA (h): sc-39275, Amylin siRNA (m): sc-39276, Amylin shRNA Plasmid (h): sc-39275-SH, Amylin shRNA Plasmid (m): sc-39276-SH, Amylin shRNA (h) Lentiviral Particles: sc-39275-V and Amylin shRNA (m) Lentiviral Particles: sc-39276-V.

Molecular Weight of Amylin: 4 kDa.

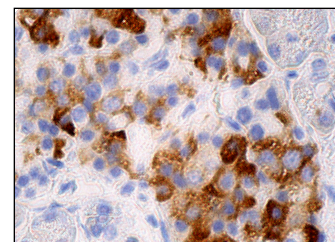
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Amylin (H-50): sc-20936. Western blot analysis of human recombinant Amylin fusion protein.



Amylin (H-50): sc-20936. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

SELECT PRODUCT CITATIONS

- Wagner, M., et al. 2008. Selective expansion of the β -cell compartment in the pancreas of keratinocyte growth factor transgenic mice. *Am. J. Physiol. Gastrointest. Liver Physiol.* 294: G1139-G1147.
- Trikha, S., et al. 2011. Clustering and internalization of toxic amylin oligomers in pancreatic cells require plasma membrane cholesterol. *J. Biol. Chem.* 286: 36086-36097.