SANTA CRUZ BIOTECHNOLOGY, INC.

Amylase (G-8): sc-166349

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The three types of Amylase found in human and mouse tissues are salivary, pancreatic and ovarian tumor. In humans there are two haplotypes consisting of very different numbers of salivary Amylase proteins. The short haplotype contains two pancreatic proteins, AMY2A and AMY2B and one salivary Amylase protein, AMY1C. The long haplotype consists of two salivary Amylase proteins, AMY1A and AMY1B. In mice, there are two apparently identical copies of AMY2A which specify pancreatic Amylase. The single copy of AMY1A is expressed in a tissue specific fashion in the salivary gland and the liver.

CHROMOSOMAL LOCATION

Genetic locus: AMY1A/AMY2A/AMY2B (human) mapping to 1p21.1; Amy2a5 (mouse) mapping to 3 F3.

SOURCE

Amylase (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 385-417 near the C-terminus of Amylase of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166349 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Amylase (G-8) is recommended for detection of precursor and mature Amylase 1A (salivary), 2A and 2B (pancreatic) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 Amylase siRNA (h): sc-29675, Amylase siRNA (m): sc-29676, Amylase shRNA Plasmid (h): sc-29675-SH, Amylase shRNA Plasmid (m): sc-29676-SH, Amylase shRNA (h) Lentiviral Particles: sc-29675-V and Amylase shRNA (m) Lentiviral Particles: sc-29676-V.

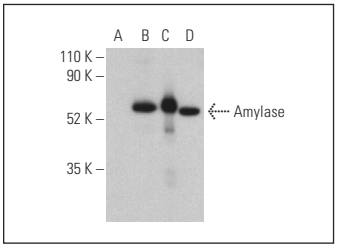
Molecular Weight of Amylase: 53 kDa.

Positive Controls: Amylase (h): 293T Lysate: sc-112718, rat pancreas extract: sc-364806 or human pancreas extract: sc-363770.

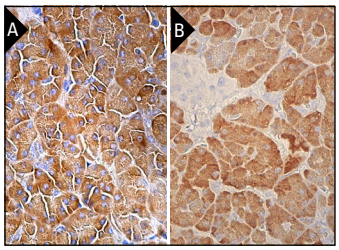
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Amylase (G-8): sc-166349. Western blot analysis of Amylase expression in non-transfected 293T: sc-117752 (**A**) and human Amylase transfected 293T: sc-112718 (**B**) whole cell lysates and human saliva (**C**) and rat pancreas (**D**) tissue extracts. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



Amylase (G-8): sc-166349. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgG Fc BP-B: sc-533652 and ImmunoCruz® ABC Kit: sc-516216 (**B**).

SELECT PRODUCT CITATIONS

1. Khamaysi, I., et al. 2017. The role of heparanase in the pathogenesis of acute pancreatitis: a potential therapeutic target. Sci. Rep. 7: 715.
2. Chuvin, N., et al. 2017. Acinar-to-ductal metaplasia induced by transforming growth factor β facilitates KRASG12D-driven pancreatic tumorigenesis. Cell. Mol. Gastroenterol. Hepatol. 4: 263-282.
3. Pizarro, E., et al. 2019. Immunocytochemical and ultrastructural evidence supporting that Andes hantavirus (ANDV) is transmitted person-to-person through the respiratory and/or salivary pathways. Front. Microbiol. 10: 2992.
4. Li, M., et al. 2021. Deep dive on the proteome of salivary extracellular vesicles: comparison between ultracentrifugation and polymer-based precipitation isolation. Anal. Bioanal. Chem. 413: 365-375.
5. Kraaij, S., et al. 2023. Lactoferrin and the development of salivary stones: a pilot study. Biometals 36: 657-665.
6. Kayal, Y., et al. 2023. Heparanase 2 (Hpa2)-a new player essential for pancreatic acinar cell differentiation. Cell Death Dis. 14: 465.

RESEARCH USE

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