SANTA CRUZ BIOTECHNOLOGY, INC.

Amylase (C-12): sc-514313

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.

REFERENCES

1. Takeuchi, T., et al. 1981. Characterization of amylases produced by tumors. Clin. Chem. 27: 556-559.
2. Schibler, U., et al. 1982. Tissue specific expression of mouse a Amylase genes. Adv. Exp. Med. Biol. 158: 381-385.
3. Zakowski, J.J., et al. 1984. Amylase from human serous ovarian tumors: purification and characterization. Clin. Chem. 30: 62-68.

CHROMOSOMAL LOCATION

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

SOURCE

Amylase (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 361-384 near the C-terminus of Amylase of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 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-514313 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Amylase (C-12) is recommended for detection of precursor and mature Amylase 1 (salivary) 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) 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.

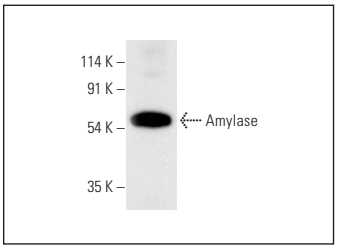
Molecular Weight of Amylase: 53 kDa.

Positive Controls: rat pancreas extract: sc-364806.

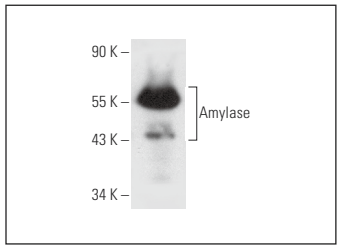
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Amylase (C-12): sc-514313. Western blot analysis of Amylase expression in rat pancreas tissue extract.



Amylase (C-12): sc-514313. Western blot analysis of Amylase expression in human saliva.

SELECT PRODUCT CITATIONS

1. Zhang, F., et al. 2019. Expansion and maintenance of CD133-expressing pancreatic ductal epithelial cells by inhibition of transforming growth factor-β signaling. Stem Cells Dev. 28: 1236-1252.
2. Toan, N.K., et al. 2022. Ascorbic acid induces salivary gland function through TET2/acetylcholine receptor signaling in aging SAMP1/Klotho$^{-/-}$ mice. Aging 14: 6028-6046.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **Amylase (G-10): sc-46657** for Amylase antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.