

Amylase (K-16): sc-31869

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., Fujiki, H. and Kameya, T. 1981. Characterization of amylases produced by tumors. *Clin. Chem.* 27: 556-559.
2. Schibler, U., Hagenbuchle, O., Young, R.A., Tosi, M. and Wellauer, P.K. 1982. Tissue specific expression of mouse alpha-amylase genes. *Adv. Exp. Med. Biol.* 158: 381-385.
3. Zakowski, J.J., Gregory, M.R. and Bruns, D.E. 1984. Amylase from human serous ovarian tumors: purification and characterization. *Clin. Chem.* 30: 62-68.
4. Brophy, C.M., Morris, J., Sussman, J. and Modlin, I.M. 1989. "Pseudo-ascites" secondary to an amylase-producing serous ovarian cystadenoma. A case study. *J. Clin. Gastroenterol.* 11: 703-706.
5. Groot, P.C., Bleeker, M.J., Pronk, J.C., Arwert, F., Mager, W.H., Planta, R.J., Eriksson, A.W. and Frants, R.R. 1989. The human alpha-amylase multigene family consists of haplotypes with variable numbers of genes. *Genomics* 5: 29-42.

CHROMOSOMAL LOCATION

Genetic locus: AMY1A/AMY1B/AMY1C (human) mapping to 1p21.1; Amy1 (mouse) mapping to 3 F3.

SOURCE

Amylase (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Amylase of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31869 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

Amylase (K-16) is recommended for detection of precursor and mature amylase 1 (salivary) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

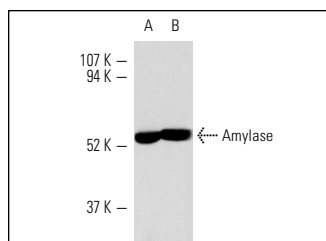
Amylase (K-16) is also recommended for detection of precursor and mature amylase 1 (salivary) in additional species, including bovine.

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.

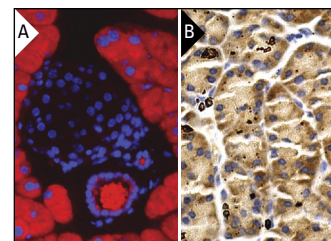
Molecular Weight of Amylase: 53 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, rat pancreas extract or mouse pancreas extract.

DATA



Amylase (K-16): sc-31869. Western blot analysis of Amylase expression in rat (A) and mouse (B) pancreas tissue extracts.



Amylase (K-16): sc-31869. Immunofluorescence staining of formalin fixed, paraffin-embedded murine pancreas tissue showing Amylase in zymogen granules within the acinar cells, and secreted Amylase present in ducts, counterstained with DAPI (Blue) to identify cell nuclei. Islets of Langerhans are not stained with the Amylase antibody. Courtesy of Mehrdad Alirezaei, PhD and Professor J. Lindsay Whitton, M.D., Ph.D., Scripps Research Institute (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells (B).

PROTOCOLS

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