

Amylase (W-20): sc-31870

BACKGROUND

The three types of Amylase found in human and mouse tissues are salivary, pancreatic and ovarian tumor. Salivary and ovarian tumor Amylase have molecular weights ranging from 61-64 kDa. Pancreatic Amylase has a molecular weight of 60 kDa. 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 α -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. "Pseudoascites" 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 α -Amylase multigene family consists of haplotypes with variable numbers of genes. Genomics 5: 29-42.
6. Cotta, M.A. and Whitehead, T.R. 1993. Regulation and cloning of the gene encoding Amylase activity of the ruminal bacterium *Streptococcus bovis*. Appl. Environ. Microbiol. 59: 189-196.

CHROMOSOMAL LOCATION

Genetic locus: AMY1A/AMY1B/AMY1C/AMY2A/AMY2B (human) mapping to 1p21.1; Amy1/Amy2a2/Amy2a3/Amy2a4/Amy2a5 (mouse) mapping to 3 F3.

SOURCE

Amylase (W-20) 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31870 P, (100 μ g 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.

APPLICATIONS

Amylase (W-20) is recommended for detection of precursor and mature Amylase 1 (salivary), Amylase 2A and Amylase 2B (pancreatic) of human origin, Amylase 1 and Amylase 2a2-5 of mouse origin, and the corresponding rat homolog 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Amylase (W-20) is also recommended for detection of precursor and mature Amylase 1 (salivary), Amylase 2A and Amylase 2B (pancreatic) in additional species, including equine, canine, bovine, porcine and avian.

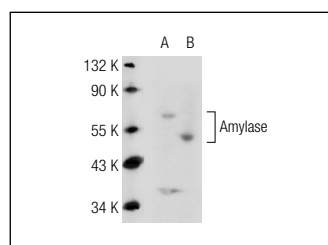
Molecular Weight of Amylase: 53 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, MIA PaCa-2 cell lysate: sc-2285 or mouse pancreas extract.

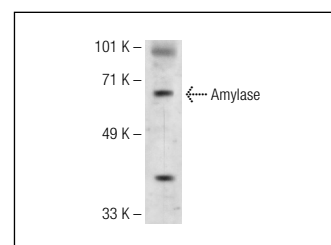
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Amylase (W-20): sc-31870. Western blot analysis of Amylase expression in ES-2 whole cell lysate (A) and mouse pancreas tissue extract (B).



Amylase (W-20): sc-31870. Western blot analysis of Amylase expression in MIA PaCa-2 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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