SANTA CRUZ BIOTECHNOLOGY, INC.

Amylase (C-20): sc-12821

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/AMY1B/AMY1C/AMY2A/AMY2B (human) mapping to 1p21.1; Amy2a5/Amy1 (mouse) mapping to 3 F3.

SOURCE

Amylase (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Amylase of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12821 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.

PROTOCOLS

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

APPLICATIONS

Amylase (C-20) is recommended for detection of Amylase 1, Amylase 2A and 2B of human origin, Amylase 1 and Amylase 2a5 of mouse origin, and, Amylase 2 of rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Amylase (C-20) is also recommended for detection of Amylase 1, Amylase 2A and 2B in additional species, including equine, canine, bovine and porcine.

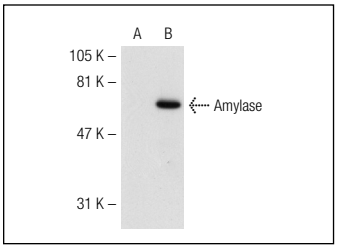
Molecular Weight of Amylase: 53 kDa.

Positive Controls: Amylase (h): 293T Lysate: sc-112718.

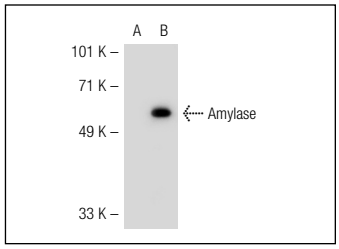
RECOMMENDED SECONDARY REAGENTS

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 (C-20): sc-12821. Western blot analysis of Amylase expression in non-transfected: sc-117752 (**A**) and human Amylase transfected: sc-112718 (**B**) 293T whole cell lysates.



Amylase (C-20): sc-12821. Western blot analysis of Amylase expression in non-transfected: sc-117752 (**A**) and human Amylase transfected: sc-112718 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yoshida, T., et al. 2003. Distinct expression patterns of splicing isoforms of mNumb in the endocrine lineage of developing pancreas. Differentiation 71: 486-495.
2. Liuzzi, J.P., et al. 2004. Responsive transporter genes within the murine intestinal-pancreatic axis form a basis of zinc homeostasis. Proc. Natl. Acad. Sci. USA 40: 14355-14360.
3. Lechner, A., et al. 2004. No evidence for significant transdifferentiation of bone marrow into pancreatic β-cells *in vivo*. Diabetes 53: 616-623.
4. Biliran, H., et al. 2005. Overexpression of cyclin D1 promotes tumor cell growth and confers resistance to cisplatin-mediated apoptosis in an elastase-Myc transgene-expressing pancreatic tumor cell line. Clin. Cancer Res. 11: 6075-6086.
5. Soto-Gutierrez, A., et al. 2006. Reversal of mouse hepatic failure using an implanted liver-assist device containing ES cell-derived hepatocytes. Nat. Biotechnol. 24: 1412-1419.
6. Endo, T., et al. 2009. Amylase α-2A autoantibodies: novel marker of autoimmune pancreatitis and fulminant type 1 diabetes. Diabetes 58: 732-737.
7. Vesterhus, M., et al. 2010. Pancreatic function in carboxyl-ester lipase knockout mice. Pancreatology 10: 467-476.
8. Hess, D.A., et al. 2011. Extensive pancreas regeneration following acinar-specific disruption of Xbp1 in mice. Gastroenterology 141: 1463-1472.