SANTA CRUZ BIOTECHNOLOGY, INC.

Amylase (G-10): sc-46657

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-10) is a mouse monoclonal antibody raised against amino acids 212-492 of Amylase 2B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Amylase (G-10) is available conjugated to agarose (sc-46657 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-46657 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46657 PE), fluorescein (sc-46657 FITC), Alexa Fluor® 488 (sc-46657 AF488), Alexa Fluor® 546 (sc-46657 AF546), Alexa Fluor® 594 (sc-46657 AF594) or Alexa Fluor® 647 (sc-46657 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46657 AF680) or Alexa Fluor® 790 (sc-46657 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Amylase (G-10) is recommended for detection of Amylase 1A, 2A and 2B 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.

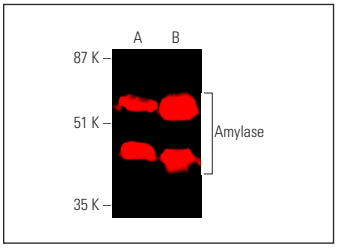
Molecular Weight of Amylase: 53 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, mouse pancreas extract: sc-364244 or rat pancreas extract: sc-364806.

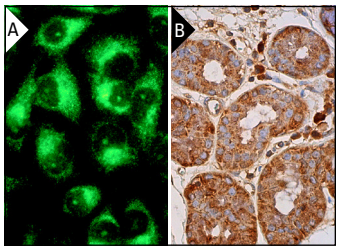
STORAGE

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

DATA



Amylase (G-10): sc-46657. Near-infrared western blot analysis of Amylase expression in mouse pancreas (**A**) and rat pancreas (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Amylase (G-10): sc-46657. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Liu, L., et al. 2007. α-fetoprotein is dynamically expressed in rat pancreas during development. Dev. Growth Differ. 49: 669-681.
2. Fanjul, M., et al. 2010. Evidence for epithelial-mesenchymal transition in adult human pancreatic exocrine cells. J. Histochem. Cytochem. 58: 807-823.
3. Preis, M., et al. 2011. MicroRNA-10b expression correlates with response to neoadjuvant therapy and survival in pancreatic ductal adenocarcinoma. Clin. Cancer Res. 17: 5812-5821.
4. Kai, K., et al. 2012. Hepatoid carcinoma of the pancreas penetrating into the gastric cavity: a case report and literature review. Pathol. Int. 62: 485-490.
5. Gu, H., et al. 2013. Alcohol exacerbates LPS-induced fibrosis in subclinical acute pancreatitis. Am. J. Pathol. 183: 1508-1517.
6. Xu, C.R., et al. 2014. Dynamics of genomic H3K27me3 domains and role of EZH2 during pancreatic endocrine specification. EMBO J. 33: 2157-2170.
7. Chen, N.M., et al. 2015. NFATc1 links EGFR signaling to induction of Sox9 transcription and acinar-ductal transdifferentiation in the pancreas. Gastroenterology 148: 1024-1034.e9.
8. Hong, X., et al. 2016. Challenges in detecting pre-malignant pancreatic lesions during acute pancreatitis using a serum microRNA assay: a study based on KrasG12D transgenic mice. Oncotarget 7: 22700-22710.
9. Zhou, X., et al. 2017. The bile acid receptor FXR attenuates acinar cell autophagy in chronic pancreatitis. Cell Death Discov. 3: 17027.
10. Matondo, R.B., et al. 2018. Atypical E2f functions are critical for pancreas polyploidization. PLoS ONE 13: e0190899.

RESEARCH USE

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