

Acid Ceramidase (T-20): sc-28486

BACKGROUND

Acid ceramidase catalyzes the degradation of ceramide in normal tissues, and deficiency leads to accumulation of ceramide in tissues, a hallmark of Farber disease. Affected individuals experience early onset joint problems and neurological problems, owing to mutations in the acid ceramidase gene. Bioinformatic analysis of gene expression also reveals acid ceramidase to be among the five most important genes associated with melanoma. In addition to ceramide hydrolysis, purified acid ceramidase also exhibits the ability to catalyze ceramide synthesis, utilizing [14C] lauric acid and sphingosine as substrates. Interestingly, pH regulates which reaction is favored; for hydrolysis the pH optimum is 4.5, whereas for the reverse reaction favors a pH of 5.5, further supporting a complex and central role for acid ceramidase in sphingolipid metabolism.

CHROMOSOMAL LOCATION

Genetic locus: CHRNA6 (human) mapping to 8p22; Chrna6 (mouse) mapping to 8 A4.

SOURCE

Acid Ceramidase (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Acid Ceramidase 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-28486 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Acid Ceramidase (T-20) is recommended for detection of precursor and mature Acid Ceramidase β subunit 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Acid Ceramidase (T-20) is also recommended for detection of precursor and mature Acid Ceramidase beta subunit in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Acid Ceramidase siRNA (h): sc-105032, Acid Ceramidase siRNA (m): sc-140807, Acid Ceramidase shRNA Plasmid (h): sc-105032-SH, Acid Ceramidase shRNA Plasmid (m): sc-140807-SH, Acid Ceramidase shRNA (h) Lentiviral Particles: sc-105032-V and Acid Ceramidase shRNA (m) Lentiviral Particles: sc-140807-V.

Molecular Weight of Fra-1 α subunit: 13 kDa.

Molecular Weight of Fra-1 β subunit: 40 kDa.

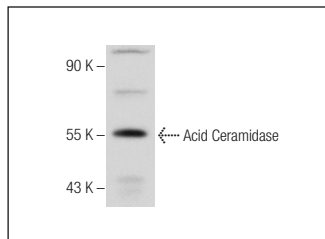
Molecular Weight of Fra-1 precursor: 53 kDa.

Positive Controls: human heart extract: sc-363763.

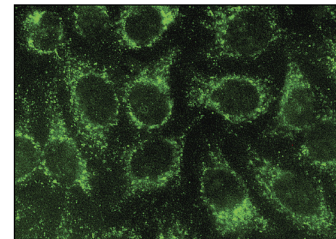
STORAGE

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

DATA



Acid Ceramidase (T-20): sc-28486. Western blot analysis of Acid Ceramidase expression in human heart tissue extract.



Acid Ceramidase (T-20): sc-28486. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Shtraizent, N., et al. 2008. Autoproteolytic cleavage and activation of human acid ceramidase. *J. Biol. Chem.* 283: 11253-11259.
- Eliyahu, E., et al. 2010. Acid ceramidase improves the quality of oocytes and embryos and the outcome of *in vitro* fertilization. *FASEB J.* 24: 1229-1238.
- Hu, X., et al. 2011. IRF8 regulates acid ceramidase expression to mediate apoptosis and suppresses myelogenous leukemia. *Cancer Res.* 71: 2882-2891.
- Eliyahu, E., et al. 2011. Identification of cystatin SA as a novel inhibitor of acid ceramidase. *J. Biol. Chem.* 286: 35624-35633.
- Yang, W.S., et al. 2012. Proteomic approach reveals FKBP4 and S100A9 as potential prediction markers of therapeutic response to neoadjuvant chemotherapy in patients with breast cancer. *J. Proteome Res.* 11: 1078-1088.

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.

MONOS
Satisfaction
Guaranteed

Try **Acid Ceramidase (23): sc-136275**, our highly recommended monoclonal alternative to Acid Ceramidase (T-20).