SANTA CRUZ BIOTECHNOLOGY, INC.

FUCA1 (H-87): sc-134716



BACKGROUND

FUCA1 (fucosidase, α -L-1, tissue) is a 466 amino acid membrane- and seminal-associated isozyme that is a member of the glycosyl hydrolase 29 family. FUCA1 functions as a homotetramer and is responsible for hydrolyzing and reducing the carbohydrate moieties of glycoproteins in various tissues. Defects in the gene encoding FUCA1 result in fucosidosis, an autosomal recessive disorder caused by an accumulation of fucose-containing glycolipids and glycoproteins. Fucosidosis, a lysosomal storage disease, is characterized by neurologic deterioration, growth retardation, visceromegaly and seizures. Early onset of fucosidosis causes coarse facial features, angiokeratoma corporis diffusum, spasticity, delayed psychomotor development and an unusual spondylometaphyseoepiphyseal dysplasia.

REFERENCES

- Seo, H.C., et al. 1993. Six additional mutations in fucosidosis: three nonsense mutations and three frameshift mutations. Hum. Mol. Genet. 2: 1205-1208.
- 2. Takeshita, H., et al. 1994. Genetically polymorphic α -L-fucosidase (FUCA1) isozymes detected in blood plasma. Hum. Genet. 94: 224-230.
- 3. Cragg, H., et al. 1997. Fucosidosis: genetic and biochemical analysis of eight cases. J. Med. Genet. 34: 105-110.
- Ip, P., et al. 2002. A novel FUCA1 mutation causing fucosidosis in a Chinese boy. J. Inherit. Metab. Dis. 25: 415-416.
- Khunsook, S., et al. 2002. Purification and characterization of human seminal plasma α-L-fucosidase. Mol. Hum. Reprod. 8: 221-227.
- 6. Intra, J., et al. 2006. An α -L-fucosidase potentially involved in fertilization is present on *Drosophila* spermatozoa surface. Mol. Reprod. Dev. 73: 1149-1158.
- 7. Li, C., et al. 2006. Purification and characterization of α -L-fucosidase from human primary hepatocarcinoma tissue. World J. Gastroenterol. 12: 3770-3775.
- Lin, S.P., et al. 2007. Mutation identification and characterization of a Taiwanese patient with fucosidosis. J. Hum. Genet. 52: 553-556.

CHROMOSOMAL LOCATION

Genetic locus: FUCA1 (human) mapping to 1p36.11; Fuca1 (mouse) mapping to 4 D3.

SOURCE

FUCA1 (H-87) is a rabbit polyclonal antibody raised against amino acids 151-237 mapping within an internal region of FUCA1 of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

FUCA1 (H-87) is recommended for detection of FUCA1 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); non cross-reactive with FUCA2.

FUCA1 (H-87) is also recommended for detection of FUCA1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FUCA1 siRNA (h): sc-78583, FUCA1 siRNA (m): sc-145267, FUCA1 shRNA Plasmid (h): sc-78583-SH, FUCA1 shRNA Plasmid (m): sc-145267-SH, FUCA1 shRNA (h) Lentiviral Particles: sc-78583-V and FUCA1 shRNA (m) Lentiviral Particles: sc-145267-V.

Molecular Weight of FUCA1: 56 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HL-60 whole cell lysate: sc-2209 or human stomach extract: sc-363780.

DATA





FUCA1 (H-87): sc-134716. Western blot analysis of FUCA1 expression in K-562 (A) and HL-60 (B) whole cell lysates and human stomach tissue extract (C).

FUCA1 (H-87): sc-134716. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

STORAGE

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

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try FUCA1 (G-12): sc-365496 or FUCA1 (14-J2): sc-100530, our highly recommended monoclonal alternatives to FUCA1 (H-87).