SANTA CRUZ BIOTECHNOLOGY, INC.

FVT1 (D-15): sc-84825

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The Power to Question

BACKGROUND

FVT1 (follicular variant translocation protein 1), also known as KDSR (3-ketodihydrosphingosine reductase) or DHSR, is a 332 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum (ER) and belongs to the short-chain dehydrogenases/reductases (SDR) family. Widely expressed with highest expression in placenta, kidney, lung, small intestine and stomach, FVT1 catalyzes the NADP-dependent reduction of 3-ketodihydrosphingosine (KDS) to dihydrosphingosine (DHS), a key reaction in sphingolipid metabolism. In humans, defects in the gene encoding FVT1 are associated with follicular lymphoma (also known as type II chronic lymphatic leukemia), a common, slow-growing cancer arising from B cells. Mutations in the gene encoding the corresponding bovine ortholog are associated with spinal muscular atrophy, a general term for a number of disorders characterized by a loss of motor neurons in the brainstem and spinal cord.

REFERENCES

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2. Nacheva, E., et al. 1994. B cell non-Hodgkin's lymphoma cell line (Karpas 1106) with complex translocation involving 18q21.3 but lacking Bcl-2 rearrangement and expression. Blood 84: 3422-3428.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 136440. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Wang, J., et al. 2003. Uterine tumor resembling ovarian sex cord tumor: report of a case with t(X;6)(p22.3;q23.1) and t(4;18)(q21.1;q21.3). Diagn. Mol. Pathol. 12: 174-180.
5. Kihara, A., et al. 2004. FVT1 is a mammalian 3-ketodihydrosphingosine reductase with an active site that faces the cytosolic side of the endoplasmic reticulum membrane. J. Biol. Chem. 279: 49243-49250.
6. Krebs, S., et al. 2007. A missense mutation in the 3-ketodihydrosphingosine reductase FVT1 as candidate causal mutation for bovine spinal muscular atrophy. Proc. Natl. Acad. Sci. USA 104: 6746-6751.
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CHROMOSOMAL LOCATION

Genetic locus: KDSR (human) mapping to 18q21.33; Kdsr (mouse) mapping to 1 E2.1.

SOURCE

FVT1 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of FVT1 of human origin.

STORAGE

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

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-84825 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FVT1 (D-15) is recommended for detection of FVT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

FVT1 (D-15) is also recommended for detection of FVT1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for FVT1 siRNA (h): sc-75069, FVT1 siRNA (m): sc-145279, FVT1 shRNA Plasmid (h): sc-75069-SH, FVT1 shRNA Plasmid (m): sc-145279-SH, FVT1 shRNA (h) Lentiviral Particles: sc-75069-V and FVT1 shRNA (m) Lentiviral Particles: sc-145279-V.

Molecular Weight of FVT1: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

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 **FVT1 (SS-7): sc-100589**, our highly recommended monoclonal alternative to FVT1 (D-15).