

## FVT1 (S-18): sc-84827

### 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 Bcl2 rearrangement and expression. *Blood* 84: 3422-3428.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 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. and Igarashi, Y. 2004. FVT-1 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 (S-18) 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-84827 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

FVT1 (S-18) 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 (S-18) is also recommended for detection of FVT1 in additional species, including equine, canine, bovine, porcine and avian.

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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.