

# SUT-1 (V-14): sc-163407

## BACKGROUND

SUT-1 (sulphate transporter 1), also known as Na<sup>+</sup>/sulphate cotransporter SUT-1 or SLC13A4 (solute carrier family 13 member 4), is a 626 amino acid multi-pass membrane protein that belongs to the SLC13A transporter family and the NADC subfamily. While highly expressed in placenta and testis, SUT-1 is expressed at lower levels in brain, heart, thymus and liver. SUT-1 functions as a sodium/sulphate cotransporter that mediates sulphate reabsorption in the high endothelial venules (HEV). The gene that encodes SUT-1 contains 46,968 bases and maps to human chromosome 7q33. Housing over 1,000 genes, chromosome 7 comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES

1. Tsiouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro  $\alpha$  2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
3. Girard, J.P., et al. 1999. Molecular cloning and functional analysis of SUT-1, a sulphate transporter from human high endothelial venules. *Proc. Natl. Acad. Sci. USA* 96: 12772-12777.
4. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604309. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
6. Markovich, D., et al. 2005. Functional characterization and genomic organization of the human Na<sup>+</sup>-sulphate cotransporter hNaS2 gene (SLC13A4). *Biochem. Biophys. Res. Commun.* 326: 729-734.
7. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.

## CHROMOSOMAL LOCATION

Genetic locus: Slc13a4 (mouse) mapping to 6 B1.

## SOURCE

SUT-1 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SUT-1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163407 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SUT-1 (V-14) is recommended for detection of SUT-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

SUT-1 (V-14) is also recommended for detection of SUT-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SUT-1 siRNA (m): sc-153942, SUT-1 shRNA Plasmid (m): sc-153942-SH and SUT-1 shRNA (m) Lentiviral Particles: sc-153942-V.

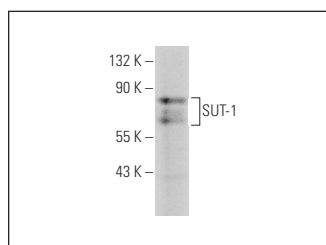
Molecular Weight of SUT-1: 70 kDa.

Positive Controls: Mouse placenta extract: sc-364247.

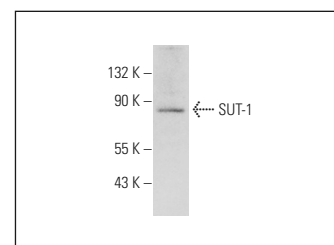
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



SUT-1 (V-14): sc-163407. Western blot analysis of SUT-1 expression in mouse placenta tissue extract.



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## STORAGE

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

## 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.