

SUT-1 (H-47): sc-292050

BACKGROUND

SUT-1 (sulphate transporter 1), also known as Na⁺/sulfate 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/sulfate cotransporter that mediates sulfate 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

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3. Girard, J.P., et al. 1999. Molecular cloning and functional analysis of SUT-1, a sulfate 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⁺-sulfate 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.
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CHROMOSOMAL LOCATION

Genetic locus: SLC13A4 (human) mapping to 7q33; Slc13a4 (mouse) mapping to 6 B1.

SOURCE

SUT-1 (H-47) is a rabbit polyclonal antibody raised against amino acids 474-520 mapping within an internal region of SUT-1 of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

SUT-1 (H-47) is recommended for detection of SUT-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 (H-47) 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 (h): sc-89760, SUT-1 siRNA (m): sc-153942, SUT-1 shRNA Plasmid (h): sc-89760-SH, SUT-1 shRNA Plasmid (m): sc-153942-SH, SUT-1 shRNA (h) Lentiviral Particles: sc-89760-V and SUT-1 shRNA (m) Lentiviral Particles: sc-153942-V.

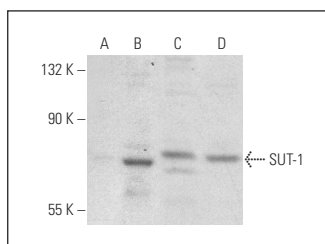
Molecular Weight of SUT-1: 70 kDa.

Positive Controls: SUT-1 (h2): 293T Lysate: sc-159221, HeLa whole cell lysate: sc-2200 or U-251-MG whole cell lysate: sc-364176.

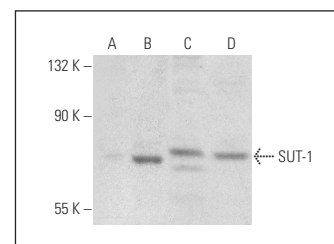
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SUT-1 (H-47): sc-292050. Western blot analysis of SUT-1 expression in non-transfected 293T: sc-117752 (A), human SUT-1 transfected 293T: sc-159221 (B), HeLa (C) and U-251-MG (D) whole cell lysates.



SUT-1 (H-47): sc-292050. Western blot analysis of SUT-1 expression in non-transfected 293T: sc-117752 (A), mouse SUT-1 transfected 293T: sc-123850 (B), HeLa (C) and U-251-MG (D) whole cell lysates.

STORAGE

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