SANTA CRUZ BIOTECHNOLOGY, INC.

SAT-1 (Q-13): sc-132090

BACKGROUND

SAT-1 (sulfate anion transporter 1), also known as SLC26A1 (solute carrier family 26 (sulfate transporter), member 1) or EDM4, is a 701 amino acid multi-pass membrane protein that belongs to the SLC26A/SulP transporter family of proteins. Members of this family are sulfate/anion transporter proteins that are well conserved in their genomic (number and size of exons) and protein (amino acid length among species) structures, yet they exhibit very restricted and distinct tissue expression patterns. SAT-1 is predominantly expressed in kidney and liver but can also be found at lower levels in spleen, small intestine, brain, pancreas, leukocytes, prostate, thymus, testis and colon. Localized to the plasma membrane, SAT-1 contains one STAS domain, twelve transmembrane domains, two N-glycosylation sites and multiple phosphorylation sites. Accepting oxalate as a cosubstrate, SAT-1 participates in transtubular sulfate reabsorption by mediating the exit of sulfate across the basolateral membrane.

REFERENCES

1. Lohi, H., et al. 2000. Mapping of five new putative anion transporter genes in human and characterization of SLC26A6, a candidate gene for pancreatic anion exchanger. Genomics 70: 102-112.
2. Vincourt, J.B., et al. 2002. Molecular cloning of SLC26A7, a novel member of the SLC26 sulfate/anion transporter family, from high endothelial venules and kidney. Genomics 79: 249-256.
3. Lee, A., et al. 2003. The mouse sulfate anion transporter gene Sat1 (Slc26a1): cloning, tissue distribution, gene structure, functional characterization, and transcriptional regulation thyroid hormone. DNA Cell Biol. 22: 19-31.
4. Regeer, R.R., et al. 2003. Characterization of the human sulfate anion transporter (hSAT-1) protein and gene (SAT1; SLC26A1). DNA Cell Biol. 22: 107-117.
5. Vincourt, J.B., et al. 2003. Molecular and functional characterization of SLC26A11, a sodium-independent sulfate transporter from high endothelial venules. FASEB J. 17: 890-892.
6. Kere, J. 2006. Overview of the SLC26 family and associated diseases. Novartis Found. Symp. 273: 2-11.

CHROMOSOMAL LOCATION

Genetic locus: Slc26a1 (mouse) mapping to 5 F.

SOURCE

SAT-1 (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SAT-1 of mouse origin.

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.

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-132090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SAT-1 (Q-13) is recommended for detection of SAT-1 of mouse and rat 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).

Suitable for use as control antibody for SAT-1 siRNA (m): sc-153230, SAT-1 shRNA Plasmid (m): sc-153230-SH and SAT-1 shRNA (m) Lentiviral Particles: sc-153230-V.

Molecular Weight of SAT-1: 75 kDa.

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.

PROTOCOLS

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