

ASCT1 (S-14): sc-50809

BACKGROUND

Neutral amino acid transporter proteins, also designated alanine/serine/cysteine/threonine transporters (ASCT), belong to the sodium:dicarboxylate (SDF) symporter family or proteins. The members of this family of proteins are multi-pass membrane-bound proteins that act as transporters for threonine, alanine, serine and cysteine. ASCT1 and ASCT2 have been shown to exhibit sodium dependence. ASCT1 is expressed in most tissues, but highest expression has been detected in muscle, brain and pancreas. The highest levels of ASCT2 expression are found in placenta, kidney, pancreas, muscle and intestine.

REFERENCES

1. Arriza, J.L., et al. 1993. Cloning and expression of a human neutral amino acid transporter with structural similarity to the glutamate transporter gene family. *J. Biol. Chem.* 268: 15329-15332.
2. Hofmann, K., et al. 1995. Human neutral amino acid transporter ASCT1: structure of the gene (SLC1A4) and localization to chromosome 2p13-p15. *Genomics* 24: 20-26.
3. Kekuda, R., et al. 1996. Cloning of the sodium-dependent, broad-scope, neutral amino acid transporter Bo from a human placental choriocarcinoma cell line. *J. Biol. Chem.* 271: 18657-18661.
4. Rasko, J.E., et al. 1999. The RD114/simian type D retrovirus receptor is a neutral amino acid transporter. *Proc. Nat. Acad. Sci. USA* 96: 2129-2134.
5. Tailor, C.S., et al. 1999. A sodium-dependent neutral-amino-acid transporter mediates infections of feline and baboon endogenous retroviruses and simian type D retroviruses. *J. Virol.* 73: 4470-4474.
6. Tailor, C.S., et al. 2001. Truncated forms of the dual function human ASCT2 neutral amino acid transporter/retroviral receptor are translationally initiated at multiple alternative CUG and GUG codons. *J. Biol. Chem.* 276: 27221-27230.

CHROMOSOMAL LOCATION

Genetic locus: SLC1A4 (human) mapping to 2p14.

SOURCE

ASCT1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ASCT1 of human origin.

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-50809 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ASCT1 (S-14) is recommended for detection of ASCT1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

ASCT1 (S-14) is also recommended for detection of ASCT1 in additional species, including equine and canine.

Suitable for use as control antibody for ASCT1 siRNA (h): sc-60208, ASCT1 shRNA Plasmid (h): sc-60208-SH and ASCT1 shRNA (h) Lentiviral Particles: sc-60208-V.

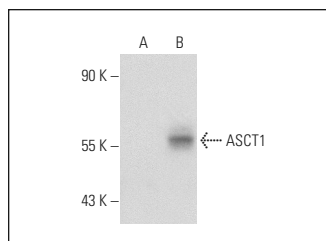
Molecular Weight of ASCT1: 56 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, ASCT1 (h3): 293T Lysate: sc-171350 or human skeletal muscle extract: sc-363776.

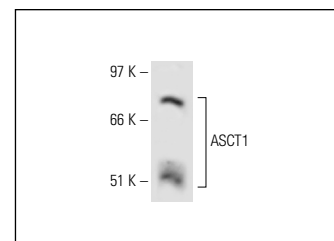
RECOMMENDED SECONDARY REAGENTS

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



ASCT1 (S-14): sc-50809. Western blot analysis of ASCT1 expression in non-transfected: sc-117752 (A) and human ASCT1 transfected: sc-171350 (B) 293T whole cell lysates.



ASCT1 (S-14): sc-50809. Western blot analysis of ASCT1 expression in human skeletal muscle tissue extract.

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.