

# ASCT2 (J-25): sc-130963

## BACKGROUND

Neutral amino acid transporter proteins, also designated alanine/serine/cysteine/threonine transporters (ASCT), belong to the sodium:dicarboxylate (SDF) symporter family of 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 2p15-p13. *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. Taylor, 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. Taylor, 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: SLC1A5 (human) mapping to 19q13.32; Slc1a5 (mouse) mapping to 7 A2.

## SOURCE

ASCT2 (J-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic ASCT2 peptide of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## 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.

## APPLICATIONS

ASCT2 (J-25) is recommended for detection of ASCT2 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ASCT2 (J-25) is also recommended for detection of ASCT2 in additional species, including canine.

Suitable for use as control antibody for ASCT2 siRNA (h): sc-60210, ASCT2 siRNA (m): sc-60211, ASCT2 shRNA Plasmid (h): sc-60210-SH, ASCT2 shRNA Plasmid (m): sc-60211-SH, ASCT2 shRNA (h) Lentiviral Particles: sc-60210-V and ASCT2 shRNA (m) Lentiviral Particles: sc-60211-V.

Molecular Weight of endogenous ASCT2: 55 kDa.

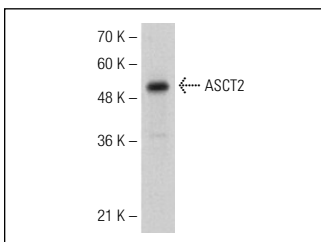
Molecular Weight of glycosylated ASCT2: 70-80 kDa.

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 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining System.

## DATA



ASCT2 (J-25): sc-130963. Western blot analysis of ASCT2 expression in Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Yang, H., et al. 2012. Impacts of birth weight on plasma, liver and skeletal muscle neutral amino acid profiles and intestinal amino acid transporters in suckling Huanjiang mini-piglets. *PLoS ONE* 7: e50921.