

ENT3 (C-14): sc-48147

BACKGROUND

Equilibrative nucleoside transporters (ENTs) regulate many physiological processes and are widely distributed in mammals, plants, yeasts, insects, nematodes and protozoans. They enable facilitated diffusion of hydrophilic nucleosides, such as adenosine, and nucleoside analogs across cell membranes. ENTs are required for uptake of antiviral and anticancer nucleoside drugs and influence a variety of physiological processes, such as neurotransmission and platelet aggregation, by regulating the amount of adenosine available to cell surface receptors. Equilibrative nucleoside transporter 3 (ENT3), also designated solute carrier family 29 (nucleoside transporters), member 3, belongs to the SLC29A transporter family and is a mammalian ENT isoform. ENT3 functions intracellularly, rather than at the plasma membrane, and may export nucleosides from the lysosomal interior.

REFERENCES

- Hyde, R.J., Cass, C.E., Young, J.D. and Baldwin, S.A. 2001. The ENT family of eukaryote nucleoside and nucleobase transporters: recent advances in the investigation of structure/function relationships and the identification of novel isoforms. *Mol. Membr. Biol.* 18: 53-63.
- Alcorn, J., Lu, X., Moscow, J.A. and McNamara, P.J. 2002. Transporter gene expression in lactating and nonlactating human mammary epithelial cells using real-time reverse transcription-polymerase chain reaction. *J. Pharmacol. Exp. Ther.* 303: 487-496.
- Acimovic, Y. and Coe, I.R. 2002. Molecular evolution of the equilibrative nucleoside transporter family: identification of novel family members in prokaryotes and eukaryotes. *Mol. Biol. Evol.* 19: 2199-2210.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: Q9BZD2. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Lu, H., Chen, C. and Klaassen, C. 2004. Tissue distribution of concentrative and equilibrative nucleoside transporters in male and female rats and mice. *Drug. Metab. Dispos.* 32: 1455-1461.
- Baldwin, S.A., Yao, S.Y., Hyde, R.J., Ng, A.M., Foppolo, S., Barnes, K., Ritzel, M.W., Cass, C.E. and Young, J.D. 2005. Functional characterization of novel human and mouse equilibrative nucleoside transporters (hENT3 and mENT3) located in intracellular membranes. *J. Biol. Chem.* 280: 15880-15887.
- Kato, R., Maeda, T., Akaike, T. and Tamai, I. 2005. Nucleoside transport at the blood-testis barrier studied with primary-cultured sertoli cells. *J. Pharmacol. Exp. Ther.* 312: 601-608.

CHROMOSOMAL LOCATION

Genetic locus: SLC29A3 (human) mapping to 10q22.1; Slc29a3 (mouse) mapping to 10 B4.

SOURCE

ENT3 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ENT3 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-48146 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ENT3 (C-14) is recommended for detection of ENT3 of mouse, rat and human 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).

ENT3 (C-14) is also recommended for detection of ENT3 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ENT3 siRNA (h): sc-60587, ENT3 siRNA (m): sc-60588, ENT3 shRNA Plasmid (h): sc-60587-SH, ENT3 shRNA Plasmid (m): sc-60588-SH, ENT3 shRNA (h) Lentiviral Particles: sc-60587-V and ENT3 shRNA (m) Lentiviral Particles: sc-60588-V.

Molecular Weight of ENT3: 60 kDa.

Positive Controls: rat liver extract: sc-2395.

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.

SELECT PRODUCT CITATIONS

- Govindarajan, R., Leung, G.P., Zhou, M., Tse, C.M., Wang, J. and Unadkat, J.D. 2009. Facilitated mitochondrial import of antiviral and anticancer nucleoside drugs by human equilibrative nucleoside transporter-3. *Am. J. Physiol. Gastrointest. Liver Physiol.* 296: G910-G922.

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 or our catalog for detailed protocols and support products.