

CD39L3 (S-15): sc-102428

BACKGROUND

Members of the ecto-nucleoside triphosphate diphosphohydrolase (eNTPDase) protein family are glycosylated enzymes that hydrolyze nucleoside 5'-triphosphates and 5'-diphosphates in extracellular space. The enzymatic activities of eNTPDase are dependent on cations such as magnesium and calcium. Members of this protein family differ in their affinities for triphosphates versus diphosphates as substrate material. CD39L3, also known as Ectonucleoside triphosphate diphosphohydrolase 3 or NTPDase 3, is a 529 amino acid multi-pass membrane protein that has a three-fold preference for hydrolysis of ATP over ADP. Both calcium and magnesium serve as cofactors for CD39L3's extremely active extracellular nucleotide hydrolysis site. CD39L3 is expressed in spleen, prostate, brain and pancreas, though moderate to low expression is observed in most tissues, with the exception of liver and peripheral blood leukocytes.

REFERENCES

1. Smith, T.M., et al. 1998. Cloning, sequencing, and expression of a human brain ecto-apyrase related to both the ecto-ATPases and CD39 ecto-apyrases1. *Biochim. Biophys. Acta* 1386: 65-78.
2. Chadwick, B.P., et al. 1998. The CD39-like gene family: identification of three new human members (CD39L2, CD39L3, and CD39L4), their murine homologues, and a member of the gene family from *Drosophila melanogaster*. *Genomics* 50: 357-367.
3. Smith, T.M., et al. 1999. Mutagenesis of two conserved tryptophan residues of the E-type ATPases: inactivation and conversion of an ecto-apyrase to an ecto-NTPase. *Biochemistry* 38: 5849-5857.
4. Yeung, G., et al. 2000. CD39L2, a gene encoding a human nucleoside diphosphatase, predominantly expressed in the heart. *Biochemistry* 39: 12916-12923.
5. Yang, F., et al. 2001. Site-directed mutagenesis of human nucleoside triphosphate diphosphohydrolase 3: the importance of residues in the apyrase conserved regions. *Biochemistry* 40: 3943-3950.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603161. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Kirley, T.L., et al. 2006. The structure of the nucleoside triphosphate diphosphohydrolases (NTPDases) as revealed by mutagenic and computational modeling analyses. *Purinergic Signal*. 2: 379-389.
8. Rucker, B., et al. 2008. E-NTPDases and ecto-5'-nucleotidase expression profile in rat heart left ventricle and the extracellular nucleotide hydrolysis by their nerve terminal endings. *Life Sci*. 82: 477-486.

CHROMOSOMAL LOCATION

Genetic locus: ENTPD3 (human) mapping to 3p22.1.

SOURCE

CD39L3 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CD39L3 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-102428 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD39L3 (S-15) is recommended for detection of CD39L3 of 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); non cross-reactive with other CD39 family members.

Suitable for use as control antibody for CD39L3 siRNA (h): sc-78367, CD39L3 shRNA Plasmid (h): sc-78367-SH and CD39L3 shRNA (h) Lentiviral Particles: sc-78367-V.

Molecular Weight of CD39L3: 76 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.

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.