CD39L1 (W-13): sc-160223



The Power to Question

BACKGROUND

CD39, also known as ectonucleoside triphosphate diphosphohydrolase 1 (ENP1), is an integral membrane glycoprotein that acts as an extracellular nucleotide-hydrolyzing enzyme. CD39 inhibits ADP-induced platelet aggregation by hydrolyzing ADP to AMP and ultimately generating adenosine. Intracellular CD39 undergoes glycosylation at 6 N-glycosylation sites and translocates to the membrane in order to be an active enzyme. CD39L1 (CD39 antigen-like 1), also known as ENTPD2 (ectonucleoside triphosphate diphosphohydrolase 2), is a 495 amino acid multi-pass membrane protein that requires calcium and magnesium cofactors to hydrolyze ATP and other nucleotides in the regulation of purigenic neurotransmission. CD39L1 is expressed in kidney, colon, heart, testis, pancreas, brain, prostate, skeletal muscle, small intestine and ovaries. There are two isoforms of CD39L1 that are produced as a result of alternative splicing events.

REFERENCES

- 1. Grinthal, A. and Guidotti, G. 2002. Transmembrane domains confer different substrate specificities and adenosine diphosphate hydrolysis mechanisms on CD39, CD39L1, and chimeras. Biochemistry 41: 1947-1956.
- Dranoff, J.A., Kruglov, E.A., Robson, S.C., Braun, N., Zimmermann, H. and Sεvigny, J. 2002. The ecto-nucleoside triphosphate diphosphohydrolase NTPDase2/CD39L1 is expressed in a novel functional compartment within the liver. Hepatology 36: 1135-1144.
- Vlajkovic, S.M., Thorne, P.R., Sevigny, J., Robson, S.C. and Housley, G.D. 2002. NTPDase1 and NTPDase2 immunolocalization in mouse cochlea: implications for regulation of p2 receptor signaling. J. Histochem. Cytochem. 50: 1435-1442.
- Robson, S.C., Wu, Y., Sun, X., Knosalla, C., Dwyer, K. and Enjyoji, K. 2005. Ectonucleotidases of CD39 family modulate vascular inflammation and thrombosis in transplantation. Semin. Thromb. Hemost. 31: 217-233.
- Wink, M.R., Braganhol, E., Tamajusuku, A.S., Lenz, G., Zerbini, L.F., Libermann, T.A., Sevigny, J., Battastini, A.M. and Robson, S.C. 2006. Nucleoside triphosphate diphosphohydrolase-2 (NTPDase2/CD39L1) is the dominant ectonucleotidase expressed by rat astrocytes. Neuroscience 138: 421-432.
- Kirley, T.L., Crawford, P.A. and Smith, T.M. 2006. The structure of the nucleoside triphosphate diphosphohydrolases (NTPDases) as revealed by mutagenic and computational modeling analyses. Purinergic Signal. 2: 379-389.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 602012. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 8. Rücker, B., Almeida, M.E., Libermann, T.A., Zerbini, L.F., Wink, M.R. and Sarkis, J.J. 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: ENTPD2 (human) mapping to 9q34.3; Entpd2 (mouse) mapping to 2 A3.

SOURCE

CD39L1 (W-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CD39L1 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-160223 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD39L1 (W-13) is recommended for detection of CD39L1 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); non cross-reactive with other CD39L family members.

CD39L1 (W-13) is also recommended for detection of CD39L1 in additional species, including canine and bovine.

Suitable for use as control antibody for CD39L1 siRNA (h): sc-92708, CD39L1 siRNA (m): sc-142197, CD39L1 shRNA Plasmid (h): sc-92708-SH, CD39L1 shRNA Plasmid (m): sc-142197-SH, CD39L1 shRNA (h) Lentiviral Particles: sc-92708-V and CD39L1 shRNA (m) Lentiviral Particles: sc-142197-V.

Molecular Weight of CD39L1: 54 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.

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