# CD39L4 (W18): sc-81995



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. Characteristically, CD39 and other members of the ecto-ATPase family contain apyrase-conserved regions and function to mediate nucleotide catabolism. CD39L4, also known as ENTPD5 (ectonucleoside triphosphate diphosphohydrolase 5), is a 428 amino acid protein that is similar to CD39 and localizes to the lumen of the endoplasmic reticulum (ER). Highly expressed in colon, testis, kidney, liver and prostate, CD39L4 is thought to promote reglycosylation reactions that are involved in the folding of glycoproteins and in quality control events in the ER. Like other members of the ecto-ATPase family, CD39L4 contains four apyrase-conserved regions and is catalytically activated by calcium and magnesium. Overexpression of CD39L4 is implicated in the development of breast, testicular and prostate cancer, suggesting that CD39L4 may be a proto-oncogene involved in carcinogenesis.

# **REFERENCES**

- Recio, J.A., et al. 2000. Both normal and transforming PCPH proteins have guanosine diphosphatase activity but only the oncoprotein cooperates with Ras in activating extracellular signal-regulated kinase ERK 1. Cancer Res. 60: 1720-1728.
- Páez, J.G., et al. 2001. Identity between the PCPH proto-oncogene and the CD39L4 (ENTPD5) ectonucleoside triphosphate diphosphohydrolase gene. Int. J. Oncol. 19: 1249-1254.
- 3. Rouzaut, A., et al. 2001. Expression of the protein product of the PCPH proto-oncogene in human tumor cell lines. Radiat. Res. 155: 181-187.
- 4. Blánquez, M.J., et al. 2002. Gradual deregulation and loss of PCPH expression in the progression of human laryngeal neoplasia. Mol. Carcinog. 35: 186-195.
- Blánquez, M.J., et al. 2004. Deregulated expression of the PCPH protooncogene in human breast cancers. Int. J. Oncol. 25: 821-830.
- Murphy-Piedmonte, D.M., et al. 2005. Bacterial expression, folding, purification and characterization of soluble NTPDase5 (CD39L4) ectonucleotidase. Biochim. Biophys. Acta 1747: 251-259.
- 7. Regadera, J., et al. 2006. PCPH expression is an early event in the development of testicular germ cell tumors. Int. J. Oncol. 28: 595-604.
- 8. Villar, J., et al. 2007. PCPH/ENTPD5 expression enhances the invasiveness of human prostate cancer cells by a protein kinase C  $\delta$ -dependent mechanism. Cancer Res. 67: 10859-10868.
- 9. Rücker, 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: ENTPD5 (human) mapping to 14q24.

# **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **SOURCE**

CD39L4 (W18) is a mouse monoclonal antibody raised against recombinant CD39L4 of human origin.

#### **PRODUCT**

Each vial contains 100  $\mu g \; lg G_{2b}$  in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

# **APPLICATIONS**

CD39L4 (W18) is recommended for detection of CD39L4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD39L4 siRNA (h): sc-92204, CD39L4 shRNA Plasmid (h): sc-92204-SH and CD39L4 shRNA (h) Lentiviral Particles: sc-92204-V.

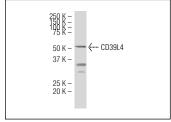
Molecular Weight of CD39L4: 49 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

### **DATA**



CD39L4 (W18): sc-81995. Western blot analysis of CD39L4 expression in Hep G2 whole cell lysate.

#### **STORAGE**

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

#### **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.