

CD39 (H-85): sc-33558

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 six N-glycosylation sites and translocates to the membrane in order to be an active enzyme. Alternative splicing gives rise to three CD39 isoforms, vascular, placenta I and placenta II. The placenta I isoform differs at the amino terminus whereas the placenta II isoform is missing amino acids 300-510 at the C-terminus. CD39 is expressed in vascular tissues including placenta, lung, skeletal muscle and kidney, as well as endothelium, smooth muscle, cardiac cells, lymphocytes (such as activated B cells), activated NK cells, macrophages, dendritic cells and platelets. CD39 may be used as an anti-thrombotic agent for pre-treating patients at risk for coronary artery occlusion and thrombotic stroke.

REFERENCES

1. Kansas, G.S., et al. 1991. Expression, distribution, and biochemistry of human CD39. Role in activation-associated homotypic adhesion of lymphocytes. *J. Immunol.* 146: 2235-2244.
2. Kaczmarek, E., et al. 1996. Identification and characterization of CD39/vascular ATP diphosphohydrolase. *J. Biol. Chem.* 271: 33116-33122.

CHROMOSOMAL LOCATION

Genetic locus: ENTPD1 (human) mapping to 10q24.1; Entpd1 (mouse) mapping to 19 C3.

SOURCE

CD39 (H-85) is a rabbit polyclonal antibody raised against amino acids 256-340 mapping within an internal region of CD39 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.

APPLICATIONS

CD39 (H-85) is recommended for detection of CD39 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD39 siRNA (h): sc-42785, CD39 siRNA (m): sc-42786, CD39 shRNA Plasmid (h): sc-42785-SH, CD39 shRNA Plasmid (m): sc-42786-SH, CD39 shRNA (h) Lentiviral Particles: sc-42785-V and CD39 shRNA (m) Lentiviral Particles: sc-42786-V.

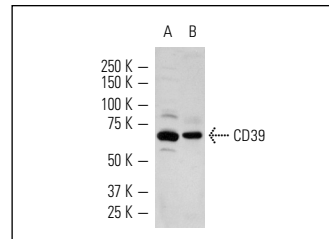
Molecular Weight of CD39: 70-100 kDa.

Positive Controls: CD39 (m): 293T Lysate: sc-119105, rat placenta tissue extract: sc-364808 or mouse placenta extract: sc-364247.

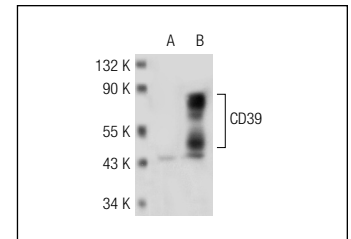
RECOMMENDED SECONDARY REAGENTS

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.

DATA



CD39 (H-85): sc-33558. Western blot analysis of CD39 expression in rat (A) and mouse (B) placenta tissue extracts.



CD39 (H-85): sc-33558. Western blot analysis of CD39 expression in non-transfected: sc-117752 (A) and mouse CD39 transfected: sc-119105 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kochetkova, I., et al. 2008. Vaccination without autoantigen protects against collagen II-induced arthritis via immune deviation and regulatory T cells. *J. Immunol.* 181: 2741-2752.
2. Hart, M.L., et al. 2010. SP1-dependent induction of CD39 facilitates hepatic ischemic preconditioning. *J. Immunol.* 184: 4017-4024.
3. Lee, J.Y., et al. 2011. ABCA1 increases extracellular ATP to mediate cholesterol efflux to ApoA-I. *Am. J. Physiol., Cell Physiol.* 301: C886-C894.

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.

MONOS
Satisfaction
Guaranteed

Try **CD39 (BU61): sc-65262**, our highly recommended monoclonal alternative to CD39 (H-85).