SANTA CRUZ BIOTECHNOLOGY, INC.

CD36 (1A7): sc-73643

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD36 (collagen type I receptor, thrombospondin receptor, FAT, GP4, GP3B, GPIV, PASIV, SCARB3) is a membrane glycoprotein on platelets, monocytes and umbilical vein endothelial cells. CD36 binds to collagen, thrombospondin, anionic phospholipids and oxidized LDL. CD36 plays a key role in both phagocytosis and lipid recycling, for constant production of mature spermatozoa. Mutations in this gene cause platelet glycoprotein deficiency. Three alternatively spliced transcript variants encoding the same protein isoform have been found for this gene. Thrombospondins are widely distributed proteins that influence a variety of adhesive processes and CD36 may have important functions as a cell adhesion molecule.

REFERENCES

1. Greenwalt, D.E., et al. 1992. Membrane glycoprotein CD36: a review of its role in adherence, signal transduction, and transfusion medicine. Blood 80: 1105-1115.
2. Daniel, J.L., et al. 1994. Collagen induces normal signal transduction in platelets deficient in CD36 (platelet glycoprotein IV). Thromb. Haemost. 71: 353-356.
3. Alessio, M., et al. 1996. Synthesis, processing, and intracellular transport of CD36 during monocytic differentiation. J. Biol. Chem. 271: 1770-1775.
4. Navazo, M.D., et al. 1996. Identification of a domain (155-183) on CD36 implicated in the phagocytosis of apoptotic neutrophils. J. Biol. Chem. 271: 15381-15385.
5. Dawson, D.W., et al. 1997. CD36 mediates the *in vitro* inhibitory effects of thrombospondin-1 on endothelial cells. J. Cell Biol. 138: 707-717.
6. Truman, L.A., et al. 2004. Macrophage chemotaxis to apoptotic Burkitt's lymphoma cells *in vitro:* role of CD14 and CD36. Immunobiology 209: 21-30.
7. Unno, Y., et al. 2004. Advanced glycation end products-modified proteins and oxidized LDL mediate down-regulation of leptin in mouse adipocytes via CD36. Biochem. Biophys. Res. Commun. 325: 151-156.
8. Pohl, J., et al. 2005. FAT/CD36-mediated long-chain fatty acid uptake in adipocytes requires plasma membrane rafts. Mol. Biol. Cell 16: 24-31.
9. Hoebe, K., et al. 2005. CD36 is a sensor of diacylglycerides. Nature 433: 523-527.

CHROMOSOMAL LOCATION

Genetic locus: CD36 (human) mapping to 7q21.11.

SOURCE

CD36 (1A7) is a mouse monoclonal antibody raised against CD36 derived from platelets of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD36 (1A7) is recommended for detection of CD36 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD36 siRNA (h): sc-29995, CD36 shRNA Plasmid (h): sc-29995-SH and CD36 shRNA (h) Lentiviral Particles: sc-29995-V.

Molecular Weight of CD36: 88 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Stremmel, W., et al. 2014. Plasma membrane phospholipase A_2 controls hepatocellular fatty acid uptake and is responsive to pharmacological modulation: implications for nonalcoholic steatohepatitis. FASEB J. 28: 3159-3170.
2. Stremmel, W., et al. 2017. The overall fatty acid absorption controlled by basolateral chylomicron excretion under regulation of p-JNK1. Biochim. Biophys. Acta 1862: 917-928.
3. Cheng, Q., et al. 2020. Overexpression of CD36 in mammary fibroblasts suppresses colony growth in breast cancer cell lines. Biochem. Biophys. Res. Commun. 526: 41-47.
4. Jabbari, K., et al. 2021. Protein ligands in the secretome of $CD36^+$ fibroblasts induce growth suppression in a subset of breast cancer cell lines. Cancers 13: 4521.

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 for detailed protocols and support products.