SANTA CRUZ BIOTECHNOLOGY, INC.

CD92 (1C4): sc-517098

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD92, also known as SLC44A1 (solute carrier family 44, member 1), CDw92 or CTL1 (choline transporter-like protein 1), is a 657 amino acid multi-pass membrane protein that belongs to the choline transporter-like family of solute carrier proteins. Expressed in cells that are associated with the hematopoietic system, CD92 functions as a choline transporter that may be involved in myelin production, as well as in membrane synthesis. Human CD92 shares 96% sequence homology with its mouse counterpart, suggesting a conserved role between species. Three isoforms of CD92 exist due to alternative splicing events. The gene encoding CD92 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

1. O'Regan, S., et al. 2000. An electric lobe suppressor for a yeast choline transport mutation belongs to a new family of transporter-like proteins. Proc. Natl. Acad. Sci. USA 97: 1835-1840.
2. Wille, S., et al. 2001. Characterization of CDw92 as a member of the choline transporter-like protein family regulated specifically on dendritic cells. J. Immunol. 167: 5795-5804.
3. Traiffort, E., et al. 2005. Molecular characterization of the family of choline transporter-like proteins and their splice variants. J. Neurochem. 92: 1116-1125.
4. Lecomte, M.J., et al. 2005. Differential expression and regulation of the high-affinity choline transporter CHT1 and choline acetyltransferase in neurons of superior cervical ganglia. Mol. Cell. Neurosci. 28: 303-313.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 606105. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Fullerton, M.D., et al. 2006. Impaired trafficking of choline transporter-like protein-1 at plasma membrane and inhibition of choline transport in THP-1 monocyte-derived macrophages. Am. J. Physiol., Cell Physiol. 290: C1230-C1238.
7. Yuan, Z., et al. 2006. Genomic organization, promoter activity, and expression of the human choline transporter-like protein 1. Physiol. Genomics 26: 76-90.

CHROMOSOMAL LOCATION

Genetic locus: SLC44A1 (human) mapping to 9q31.1.

SOURCE

CD92 (1C4) is a mouse monoclonal antibody raised against amino acids 74-183 representing partial length CD92 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD92 (1C4) is recommended for detection of CD92 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD92 siRNA (h): sc-62086, CD92 shRNA Plasmid (h): sc-62086-SH and CD92 shRNA (h) Lentiviral Particles: sc-62086-V.

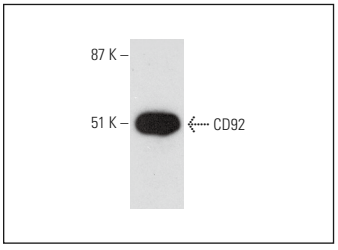
Molecular Weight of CD92: 73 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

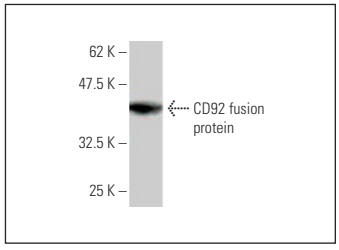
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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



CD92 (1C4): sc-517098. Western blot analysis of CD92 expression in human skeletal muscle tissue extract.



CD92 (1C4): sc-517098. Western blot analysis of human recombinant CD92 fusion protein.

SELECT PRODUCT CITATIONS

1. Rabow, Z., et al. 2022. p73α1, an isoform of the p73 tumor suppressor, modulates lipid metabolism and cancer cell growth via stearoyl-CoA desaturase-1. Cells 11: 2516.

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 for detailed protocols and support products.