SANTA CRUZ BIOTECHNOLOGY, INC.

CD83 (6D287): sc-70806

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD83 is a heavily glycosylated membrane protein of the immunoglobulin (Ig) superfamily that is expressed in mature dendritic cells, Langerhans cells and interdigitating reticulum cells within lymphoid tissues. Structurally, CD83 resembles other Ig superfamily members, which have an extracellular V-type Ig-like domain, a single transmembrane domain and a 40 residue cytoplasmic tail. CD83 expression is used as a marker for mature, antigen presenting dendritic cells that are capable of generating tumor-specific T cell immunity, a phenotype with implications as an anti-cancer vaccine. CD83-IgG_1(fc) chimera studies indicate that CD83 is a sialic acid-binding, Ig-like Lectin (Siglec) adhesion molecule that is involved in cell adhesion/signaling by hosting dendritic cell interactions with monocytes and $CD8^+$ T cells.

REFERENCES

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3. Scholler, N., Hayden-Ledbetter, M., Hellstrom, K.E., Hellstrom, I. and Ledbetter, J.A. 2001. CD83 is a sialic acid-binding Ig-like lectin (Siglec) adhesion receptor that binds monocytes and a subset of activated $CD8^+$ T cells. J. Immunol. 166: 3865-3872.
4. Fong, L., Brockstedt, D., Benike, C., Wu, L. and Engleman, E.G. 2001. Dendritic cells injected via different routes induce immunity in cancer patients. J. Immunol. 166: 4254-4259.
5. Berger, C.L., Xu, A.L., Hanlon, D., Lee, C., Schechner, J., Glusac, E., Christensen, I., Snyder, E., Holloway, V., Tigelaar, R. and Edelson, R.L. 2001. Induction of human tumor-loaded dendritic cells. Int. J. Cancer 91: 438-447.
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7. Lechmann, M., Kremmer, E., Sticht, H. and Steinkasserer, A. 2002. Overexpression, purification, and biochemical characterization of the extracellular human CD83 domain and generation of monoclonal antibodies. Protein Expr. Purif. 24: 445-452.

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.

CHROMOSOMAL LOCATION

Genetic locus: CD83 (human) mapping to 6p23.

SOURCE

CD83 (6D287) is a rat monoclonal antibody raised against the extracellular domain of CD83 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

CD83 (6D287) is available conjugated to either phycoerythrin (sc-70806 PE) or fluorescein (sc-70806 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CD83 (6D287) is recommended for detection of CD83 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

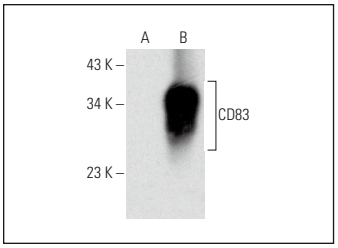
Suitable for use as control antibody for CD83 siRNA (h): sc-42808, CD83 shRNA Plasmid (h): sc-42808-SH and CD83 shRNA (h) Lentiviral Particles: sc-42808-V.

Molecular Weight of CD83 precursor: 32 kDa.

Molecular Weight of glycosylated CD83: 45-60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, CD83 (h2): 293T Lysate: sc-175341 or Jurkat whole cell lysate: sc-2204.

DATA



CD83 (6D287): sc-70806. Western blot analysis of CD83 expression in non-transfected: sc-117752 (**A**) and human CD83 transfected: sc-175341 (**B**) 293T whole cell lysates.

RESEARCH USE

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

CONJUGATES

See **CD83 (D-3): sc-55536** for CD83 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488, 546, 594, 647, 680 and 790.