SANTA CRUZ BIOTECHNOLOGY, INC.

CD83 (N-15): sc-14590

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 anticancer 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

1. Zhou, L.J., et al. 1992. A novel cell-surface molecule expressed by human interdigitating reticulum cells, Langerhans cells, and activated lymphocytes is a new member of the Ig superfamily. J. Immunol. 149: 735-742.
2. Kozlow, E.J., et al. 1993. Subtractive cDNA cloning of a novel member of the Ig gene superfamily expressed at high levels in activated B lymphocytes. Blood 81: 454-461.
3. Scholler, N., et al. 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., et al. 2001. Dendritic cells injected via different routes induce immunity in cancer patients. J. Immunol. 166: 4254-4259.
5. Berger, C.L., et al. 2001. Induction of human tumor-loaded dendritic cells. Int. J. Cancer 91: 438-447.
6. Lechmann, M., et al. 2001. The extracellular domain of CD83 inhibits dendritic cell-mediated T cell stimulation and binds to a ligand on dendritic cells. J. Exp. Med. 194: 1813-1821.

CHROMOSOMAL LOCATION

Genetic locus: CD83 (human) mapping to 6p23; Cd83 (mouse) mapping to 13 A4.

SOURCE

CD83 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CD83 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.

Blocking peptide available for competition studies, sc-14590 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CD83 (N-15) is recommended for detection of CD83 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).

CD83 (N-15) is also recommended for detection of CD83 in additional species, including equine and bovine.

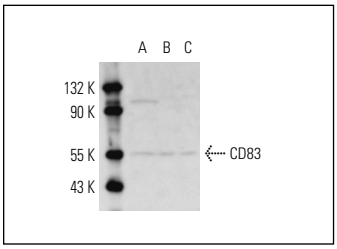
Suitable for use as control antibody for CD83 siRNA (h): sc-42808, CD83 siRNA (m): sc-42809, CD83 shRNA Plasmid (h): sc-42808-SH, CD83 shRNA Plasmid (m): sc-42809-SH, CD83 shRNA (h) Lentiviral Particles: sc-42808-V and CD83 shRNA (m) Lentiviral Particles: sc-42809-V.

Molecular Weight of CD83 precursor: 32 kDa.

Molecular Weight of glycosylated CD83: 45-60 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Ramos cell lysate: sc-2216 or Jurkat whole cell lysate: sc-2204.

DATA



CD83 (N-15): sc-14590. Western blot analysis of CD83 expression in Jurkat (**A**), MOLT-4 (**B**) and Ramos (**C**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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