

CD100 (D-5): sc-166367

BACKGROUND

Semaphorins comprise a family of phylogenetically conserved proteins containing a 500 amino acid region termed the "Sema domain" in the amino-terminus. The Semaphorin family is subdivided into eight groups. CD100 (SEMA4D) is a transmembrane protein belonging to group IV of the Semaphorin family. CD100 is expressed in both embryonic and adult kidney, heart, lung and neural tissues. Plexin-B1, a receptor expressed abundantly in fetal brain and kidney, binds CD100 with high affinity. CD100 is the only member of the Semaphorin family that is expressed in the immune system. CD100 activates T cell proliferation and promotes B cell aggregation. CD100 regulates B cell response by negating an inhibitory signal from CD72 that normally diminishes B cell response. This signal is turned off when CD100 binds to CD72 and induces tyrosine dephosphorylation of CD72, followed by the dissociation of SHP-1 from CD72. The gene encoding human CD100 maps to chromosome 9q22.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SEMA4D (human) mapping to 9q22.2.

SOURCE

CD100 (D-5) is a mouse monoclonal antibody raised against amino acids 563-862 mapping at the C-terminus of CD100 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD100 (D-5) is recommended for detection of CD100 of human origin by Western Blotting (starting dilution 1:100, 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 CD100 siRNA (h): sc-42817, CD100 shRNA Plasmid (h): sc-42817-SH and CD100 shRNA (h) Lentiviral Particles: sc-42817-V.

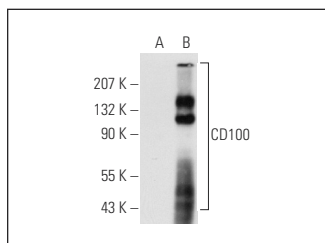
Molecular Weight of CD100: 150 kDa.

Positive Controls: CD100 (h): 293T Lysate: sc-116252, SK-N-SH cell lysate: sc-2410 or Jurkat whole cell lysate: sc-2204.

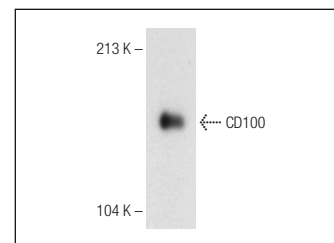
RECOMMENDED SUPPORT REAGENTS

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). 3) 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.

DATA



CD100 (D-5): sc-166367. Western blot analysis of CD100 expression in non-transfected: sc-117752 (A) and human CD100 transfected: sc-116252 (B) 293T whole cell lysates.



CD100 (D-5): sc-166367. Western blot analysis of CD100 expression in Jurkat whole cell lysate.

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.