

CLEC-1 (D-6): sc-393134

BACKGROUND

The human β -glucan protein (Dectin-1) is a small, type II transmembrane receptor that enables β -glucan-dependent, nonopsonic recognition of zymosan and other yeast-derived particles by primary macrophages. Dectin-1 is the human homolog of the C-type (calcium dependent) lectin-like receptor (CLEC) family that play an important role in regulating innate immunity. CLEC-1 is a 280 amino acid single-pass type II transmembrane protein expressed in dendritic and endothelial cells. It accumulates in perinuclear compartments and requires an associated chain to reach the cell surface. CLEC-1 is involved in antigen uptake and is homologous to the natural killer (NK) cell receptors, NKG2s and CD94, that interact with major histocompatibility complex class I molecules and either inhibit or activate cytotoxicity and cytokine secretion. It has a single carbohydrate recognition domain with six conserved and two additional cysteine residues. Additionally, CLEC-1 has a cytoplasmic immunoreceptor tyrosine-based motif and many potential phosphorylation sites.

REFERENCES

1. Colonna, M., et al. 2000. Molecular characterization of two novel C-type lectin-like receptors, one of which is selectively expressed in human dendritic cells. *Eur. J. Immunol.* 30: 697-704.
2. Sobanov, Y., et al. 2001. A novel cluster of lectin-like receptor genes expressed in monocytic, dendritic and endothelial cells maps close to the NK receptor genes in the human NK gene complex. *Eur. J. Immunol.* 31: 3493-3503.
3. Lu, Q., et al. 2005. Snake venom C-type lectins interacting with platelet receptors. Structure-function relationships and effects on haemostasis. *Toxicon* 45: 1089-1098.

CHROMOSOMAL LOCATION

Genetic locus: CLEC1A (human) mapping to 12p13.2.

SOURCE

CLEC-1 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 257-280 at the C-terminus of CLEC-1 of human origin.

PRODUCT

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

CLEC-1 (D-6) is available conjugated to agarose (sc-393134 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393134 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393134 PE), fluorescein (sc-393134 FITC), Alexa Fluor® 488 (sc-393134 AF488), Alexa Fluor® 546 (sc-393134 AF546), Alexa Fluor® 594 (sc-393134 AF594) or Alexa Fluor® 647 (sc-393134 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393134 AF680) or Alexa Fluor® 790 (sc-393134 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393134 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

CLEC-1 (D-6) is recommended for detection of CLEC-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CLEC-1 siRNA (h): sc-60396, CLEC-1 shRNA Plasmid (h): sc-60396-SH and CLEC-1 shRNA (h) Lentiviral Particles: sc-60396-V.

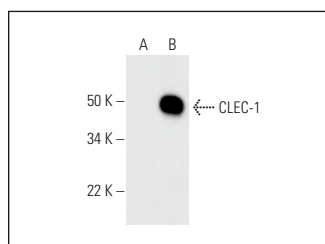
Molecular Weight of CLEC-1: 32 kDa.

Positive Controls: CLEC-1 (h): 293T Lysate: sc-114490.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



CLEC-1 (D-6): sc-393134. Western blot analysis of CLEC-1 expression in non-transfected: sc-117752 (A) and human CLEC-1 transfected: sc-114490 (B) 293T whole cell lysates.

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.