SANTA CRUZ BIOTECHNOLOGY, INC.

CLEC-6 (A-15): sc-49418

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 expressed in dendritic cells and is the human homolog of the C-type (calcium dependent) lectin-like receptor (CLEC) family that plays an important role in regulating innate immunity. The CLEC protein structure has a specific fold that provides a highly static scaffold for combinatorial display of variable antigen residues. This fold differs from the classic immunoglobulin fold, illustrating an evolutionary solution for balancing diversity against stability. CLEC-6 is a single-pass, type II transmembrane protein that is highly expressed in bone marrow and spleen and weakly expressed in peripheral blood leukocytes. CLEC-6 may function as a receptor in the antigen uptake at the infection location.

REFERENCES

1. Arce, I., et al. 2001. Molecular and genomic characterization of human DLEC, a novel member of the C-type lectin receptor gene family preferentially expressed on monocyte-derived dendritic cells. Eur. J. Immunol. 31: 2733-2740.
2. Hermanz-Falcón, P., et al. 2001. Cloning of human Dectin-1, a novel C-type lectin-like receptor gene expressed on dendritic cells. Immunogenetics 53: 288-295.
3. 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.
4. Yokota, K., et al. 2001. Identification of a human homologue of the dendritic cell-associated C-type lectin-1, Dectin-1. Gene 272: 51-60.
5. Gavino, A.C., et al. 2005. Identification and expression profiling of a human C-type lectin, structurally homologous to mouse Dectin-2. Exp. Dermatol. 14: 281-288.
6. McMahon, S.A., et al. 2005. The C-type lectin fold as an evolutionary solution for massive sequence variation. Nat. Struct. Mol. Biol. 12: 886-892.
7. Chaipan, C., et al. 2006. DC-SIGN and CLEC-2 mediate human immunodeficiency virus type 1 capture by platelets. J. Virol. 80: 8951-8960.

CHROMOSOMAL LOCATION

Genetic locus: CLEC4D (human) mapping to 12p13.31; Clec4d (mouse) mapping to 6 F2.

SOURCE

CLEC-6 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CLEC-6 of human origin.

STORAGE

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

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-49418 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CLEC-6 (A-15) is recommended for detection of CLEC-6 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); may cross-react with Dcir3 in rat.

CLEC-6 (A-15) is also recommended for detection of CLEC-6 in additional species, including canine and bovine.

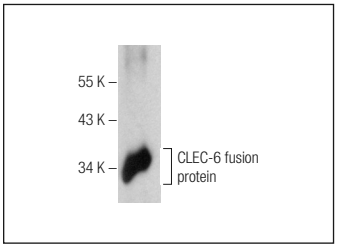
Suitable for use as control antibody for CLEC-6 siRNA (h): sc-60398, CLEC-6 siRNA (m): sc-60399, CLEC-6 shRNA Plasmid (h): sc-60398-SH, CLEC-6 shRNA Plasmid (m): sc-60399-SH, CLEC-6 shRNA (h) Lentiviral Particles: sc-60398-V and CLEC-6 shRNA (m) Lentiviral Particles: sc-60399-V.

Molecular Weight of CLEC-6: 30 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CLEC-6 (A-15): sc-49418. Western blot analysis of human recombinant CLEC-6 fusion protein.

RESEARCH USE

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