# SANTA CRUZ BIOTECHNOLOGY, INC.

# CLEC-9A (D-15): sc-167491



The Power to Question

## BACKGROUND

The C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily consists of a variety of proteins that share a common protein fold and have diverse functions, including cell-cell signaling, cell adhesion, glycoprotein turnover and immune responses. CLEC-9A (C-type lectin domain family 9 member A), also known as DNGR1 (dendritic cell natural killer lectin group receptor 1), is a 241 amino acid single-pass type II membrane protein that contains one C-type lectin domain and belongs to the CTL/CTLD superfamily. Expressed in myeloid lineage cells, brain, spleen and thymus, CLEC-9A is a group V C-type lectin-like receptor (CTLR) that acts as an activation receptor. The gene encoding CLEC-9A maps to human chromosome 12p13.2 and mouse chromosome 6 F3.

## REFERENCES

- 1. Drickamer, K. 1999. C-type lectin-like domains. Curr. Opin. Struct. Biol. 9: 585-590.
- Arce, I., Roda-Navarro, P., Montoya, M.C., Hernanz-Falcón, P., Puig-Kröger, A. and Fernández-Ruiz, E. 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.
- Ebner, S., Sharon, N. and Ben-Tal, N. 2003. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. Proteins 53: 44-55.
- McMahon, S.A., Miller, J.L., Lawton, J.A., Kerkow, D.E., Hodes, A., Marti-Renom, M.A., Doulatov, S., Narayanan, E., Sali, A., Miller, J.F. and Ghosh, P. 2005. The C-type lectin fold as an evolutionary solution for massive sequence variation. Nat. Struct. Mol. Biol. 12: 886-892.
- Gijzen, K., Cambi, A., Torensma, R. and Figdor, C.G. 2006. C-type lectins on dendritic cells and their interaction with pathogen-derived and endogenous glycoconjugates. Curr. Protein Pept. Sci. 7: 283-294.
- Huysamen, C., Willment, J.A., Dennehy, K.M. and Brown, G.D. 2008. CLEC9A is a novel activation C-type lectin-like receptor expressed on BDCA3+ dendritic cells and a subset of monocytes. J. Biol. Chem. 283: 16693-16701.
- Sancho, D., Mourão-Sá, D., Joffre, O.P., Schulz, O., Rogers, N.C., Pennington, D.J., Carlyle, J.R. and Reis e Sousa, C. 2008. Tumor therapy in mice via antigen targeting to a novel, DC-restricted C-type lectin. J. Clin. Invest. 118: 2098-2110.
- Sancho, D., Joffre, O.P., Keller, A.M., Rogers, N.C., Martínez, D., Hernanz-Falcón, P., Rosewell, I. and Reis e Sousa, C. 2009. Identification of a dendritic cell receptor that couples sensing of necrosis to immunity. Nature 458: 899-903.
- 9. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612252. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

## **RESEARCH USE**

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

#### CHROMOSOMAL LOCATION

Genetic locus: Clec9a (mouse) mapping to 6 F3.

#### SOURCE

CLEC-9A (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal extracellular domain of CLEC-9A of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167491 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **APPLICATIONS**

CLEC-9A (D-15) is recommended for detection of CLEC-9A of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other CLEC family members.

Suitable for use as control antibody for CLEC-9A siRNA (m): sc-142390, CLEC-9A shRNA Plasmid (m): sc-142390-SH and CLEC-9A shRNA (m) Lentiviral Particles: sc-142390-V.

Molecular Weight of CLEC-9A: 27 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) Immunofluo-rescence: 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.

#### **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 or our catalog for detailed protocols and support products.