

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLEC9a in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse CLEC9a is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CLEC9a Lys57-Val241 Accession # Q6UXN8
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Binding Inhibition	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CLEC9a (C-type lectin domain family 9 member A), also known as DNGR-1, is a type II transmembrane glycoprotein member of the C-type lectin superfamily (1, 2). Mature human CLEC9a consists of a 35 amino acid (aa) cytoplasmic domain with an ITAM-like motif, a 21 aa transmembrane segment, and a 185 extracellular domain (ECD) that contains a stalk region and one C-type lectin domain (CTLD) (3-5). Within the ECD, human CLEC9a shares 57% aa sequence identity with mouse and rat CLEC9a. Although the CTLD of CLEC9a structurally resembles that of other C-type lectins, it lacks the conserved residues that typically mediate calcium and carbohydrate binding. CLEC9a is expressed as a disulfide-linked homodimer of approximately 45-50 kDa N-glycosylated subunits (3, 5). Human CLEC9a expression is restricted to a subpopulation of BDCA-3⁺ conventional dendritic cells (cDC) and CD16⁺ monocytes (3-5). BDCA-3⁺ cDC are analogous to mouse CD8⁺ cDC which are specialized in antigenic cross-presentation in complex with MHC class I molecules (6). In mouse, CLEC9a is additionally expressed on plasmacytoid dendritic cells (4, 5). CLEC9a ligation enhances antigen uptake and processing, leading to presentation on MHC class I and cytotoxic T cell (CTL) priming (3-5). In mouse, CLEC9a recognizes normally intracellular determinant(s) of necrotic cells and mediates their uptake by the dendritic cell (7). The subsequent antigenic cross-presentation to CTL is important for clearing necrotic cellular debris (7). CLEC9a signaling triggers activation of the tyrosine kinase Syk (3, 7).

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