

DESCRIPTION

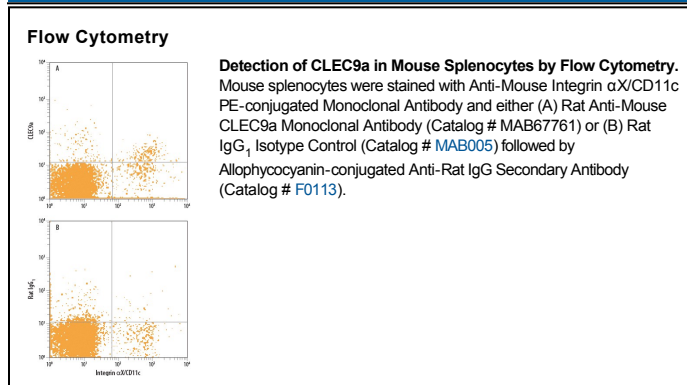
| | |
|---------------------------|---|
| Species Reactivity | Mouse |
| Specificity | Detects mouse CLEC9a. |
| Source | Monoclonal Rat IgG ₁ Clone # 7H11 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | RBL-2H3 rat basophilic leukemia cell line expressing mouse CLEC9a fused to an HA epitope Accession # Q8BRU4 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

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.

| | Recommended Concentration | Sample |
|----------------------------|--|---------------|
| Flow Cytometry | 2.5 µL/10 ⁶ cells | See Below |
| CyTOF-ready | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |
| Western Blot | Sancho D., <i>et al.</i> (2008) <i>J. Clin. Invest.</i> 118 :2098. | |
| Immunocytochemistry | Sancho D., <i>et al.</i> (2008) <i>J. Clin. Invest.</i> 118 :2098. | |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.5 mg/mL. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

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. 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 50 kDa N-glycosylated subunits. Human CLEC9a expression is restricted to a subpopulation of BDCA-3⁺ conventional dendritic cells (cDC) and CD16⁺ monocytes. BDCA-3⁺ cDC are analogous to mouse CD8⁺ cDC which are specialized in antigenic cross-presentation in complex with MHC class I molecules. In mouse, CLEC9a is additionally expressed on plasmacytoid dendritic cells. CLEC9a ligation enhances antigen uptake and processing, leading to presentation on MHC class I and cytotoxic T cell (CTL) priming. In mouse, CLEC9a recognizes normally intracellular determinant(s) of necrotic cells and mediates their uptake by the dendritic cell. The subsequent antigenic cross-presentation to CTL is important for clearing necrotic cellular debris. CLEC9a signaling triggers activation of the tyrosine kinase Syk. Alternative splicing of mouse CLEC9a generates isoforms with deletions in the transmembrane segment, stalk region, or CTLD. Within aa 57-264 of the ECD, mouse CLEC9a shares 57% and 80% aa sequence identity with human and rat CLEC9a, respectively.