Human/Mouse CLEC10A/CD301 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4888

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human CLEC10A/CD301 in direct ELISAs and Western blots and mouse CLEC10A in Western blots. In this format, less than 1% cross-reactivity with recombinant human (rh) CLEC1, rhCLEC2, and rhCLEC3B is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CLEC10A/CD301 Gln61-His316 Accession # Q8IUN9
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.

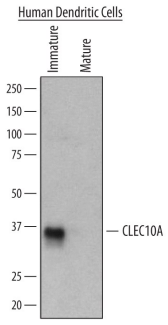
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/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.	

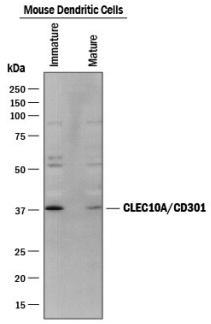
DATA

Western Blot



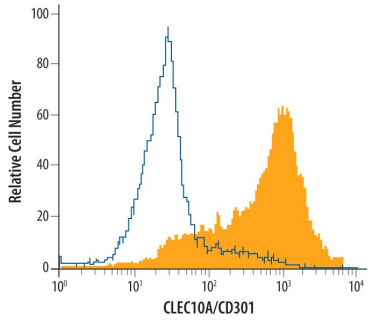
Detection of Human CLEC10A/CD301 by Western Blot. Western blot shows lysates of human immature dendritic cells and human mature dendritic cells. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse CLEC10A/CD301 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4888) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for CLEC10A/CD301 at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot



Detection of Mouse CLEC10A/CD301 by Western Blot. Western blot shows lysates of mouse immature dendritic cells and mouse mature dendritic cells. PVDF membrane was probed with 2 µg/mL of Goat Anti-Human/Mouse CLEC10A/CD301 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4888) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for CLEC10A/CD301 at approximately 37 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of CLEC10A in Human Dendritic Cells by Flow Cytometry. Human immature dendritic cells were stained with Goat Anti-Human/Mouse CLEC10A/CD301 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4888, filled histogram) or isotype control antibody (Catalog # AB-108-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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.** ● 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human/Mouse CLEC10A/CD301 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4888

BACKGROUND

CLEC10A, also known as macrophage galactose/N-acetyl-galactosamine (GalNAc) specific lectin (MGL), CD301, DC-ASGPR, and HML, is a 35-40 kDa type II transmembrane glycoprotein that belongs to the C-type lectin family (1). Human and rat carry a single gene for CLEC10A/MGL, while mouse has two closely related MGL1 and MGL2 genes. Human CLEC10A/MGL consists of a 39 amino acid (aa) cytoplasmic region, a 21 aa transmembrane segment and a 256 aa extracellular domain (ECD) with one carbohydrate recognition domain (CRD) and a neck region (2). Within the CRD, human CLEC10A/MGL shares 64% - 70% aa sequence identity with mouse MGL1, mouse MGL2, and rat MGL. Alternate splicing generates multiple isoforms of human CLEC10A/MGL with 27 aa, 3 aa, and/or 4 aa deletions within the ECD (3, 4). CLEC10A/MGL is expressed on immature myleloid dendritic cells and alternatively activated (tolerogenic) macrophages and is upregulated by the immunosuppressant dexamethasone (3-7). CLEC10A/MGL selectively binds and internalizes terminal nonsialylated α- or β-linked GalNAc moieties on O-linked carbohydrates, including the Tn carcinoma antigen (2-4, 8, 9). Similar ligand preference is exhibited by mouse MGL2 but not MGL1 (10). CLEC10A/MGL expressed on tolerogenic dendritic cells binds carbohydrate determinants on CD45 (RA, RB, and RC but not RO isoforms) expressed by T, NK, and B cells (6). This interaction inhibits effector T cell activation and induces their apoptosis (6). CLEC10A/MGL also binds the GP envelope glycoprotein on Marburg and Ebola viruses and enhances viral entry and infectivity (11).

References:

1. Zelensky, A.N. and J.E. Gready (2005) FEBS J. **272**:6179.
2. Suzuki, N. *et al.* (1996) J. Immunol. **156**:128.
3. Higashi, N. *et al.* (2002) J. Biol. Chem. **277**:20686.
4. Valladeau, J. *et al.* (2001) J. Immunol. **167**:5767.
5. van Vliet, S.J. *et al.* (2006) Immunobiology **211**:577.
6. van Vliet, S.J. *et al.* (2006) Nat. Immunol. **7**:1200.
7. Raes, G. *et al.* (2005) J. Leukoc. Biol. **77**:321.
8. van Vliet, S.J. *et al.* (2005) Int. Immunol. **17**:661.
9. Higashi, N. *et al.* (2002) Int. Immunol. **14**:545.
10. Tsuiji, M. *et al.* (2002) J. Biol. Chem. **277**:28892.
11. Takada, A. *et al.* (2004) J. Virol. **78**:2943.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956