

PE/Dazzle™ 594 anti-human CD301 (CLEC10A) Antibody

Catalog# / Size	354713 / 25 tests 354714 / 100 tests
Clone	H037G3
Regulatory Status	RUO
Other Names	Macrophage galactose/Nacetylglactosamine (GalNAc) specific lectin, MGL, DCASGPR, HML CLECSF13, CLECSF14, HML2
Isotype	Mouse IgG2a, κ
Description	CD301, also known as CLEC10A, macrophage galactose/N-acetylglactosamine (GalNAc) specific lectin (MGL), DCASGPR, and HML, is a 40 kD type II transmembrane glycoprotein, which belongs to the C-type lectin family. Human CD301 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. CD301 is expressed on immature myeloid dendritic cells and alternatively activated (tolerogenic) macrophages. The expression level is upregulated by immunosuppressant dexamethasone. Human CD301 has an exclusive specificity for rare terminal GalNAc structures, which are revealed on the tumor-associated mucin MUC1 and CD45 (RA, RB, and RC but not RO isoforms). This interaction inhibits effector T cell activation and induces their apoptosis. CD301 also binds the GP envelope glycoprotein on Marburg and Ebola viruses and enhances viral entry and infectivity.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cynomolgus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant CD301 (extracellular domain)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	H037G3 antibody binding is divalent cation dependent.
RRID	AB_3683377 (BioLegend Cat. No. 354713) AB_3683377 (BioLegend Cat. No. 354714)

Antigen Details

Structure	40 kD type II transmembrane glycoprotein, 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
Distribution	Immature myeloid dendritic cells, activated macrophages
Function	Cell adhesion, cell-cell signaling, glycoprotein turnover, inflammation, immune response
Interaction	Carbohydrate determinants, GP envelope glycoprotein on Marburg and Ebola viruses
Ligand/Receptor	Glycans containing terminal GalNAc moieties
Cell Type	Dendritic cells, Macrophages
Biology Area	Cell Adhesion, Cell Biology, Immunology, Innate Immunity, Signal Transduction
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Van Vliet SJ, <i>et al.</i> 2006. <i>Nat. Immunol.</i> 7:1200. 2. Higashi N, <i>et al.</i> 2002. <i>J. Biol. Chem.</i> 277:20686. 3. Tsuiji M, <i>et al.</i> 2002. <i>J. Biol. Chem.</i> 277:28892. 4. Valladeau J, <i>et al.</i> 2001. <i>J. Immunol.</i> 167:5767. 5. Suzuki N, <i>et al.</i> 1996. <i>J. Immunol.</i> 156:128.
Gene ID	10462

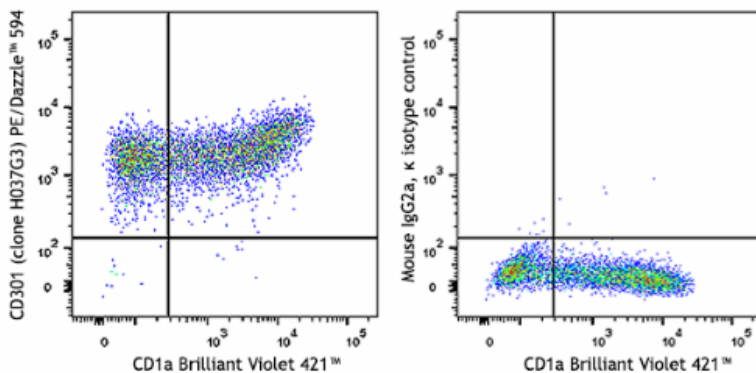
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

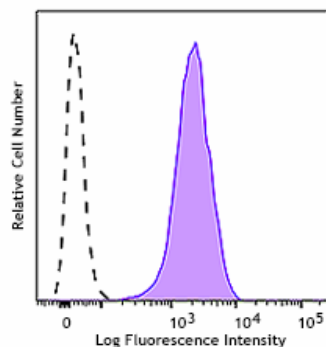
Other Formats

Purified anti-human CD301 (CLEC10A), PE anti-human CD301 (CLEC10A), APC anti-human CD301 (CLEC10A), TotalSeq™-A0401 anti-human CD301 (CLEC10A), APC/Fire™ 750 anti-human CD301 (CLEC10A), PE/Cyanine7 anti-human CD301 (CLEC10A), PE/Dazzle™ 594 anti-human CD301 (CLEC10A), TotalSeq™-B0401 anti-human CD301 (CLEC10A) Antibody, TotalSeq™-C0401 anti-human CD301 (CLEC10A)

Product Data



Human monocyte-derived dendritic cells were stained with anti-human CD1a (clone HI149) Brilliant Violet 421™ and anti-human CD301 (CLEC10A) (clone H037G3) PE/Dazzle™ 594 (left) or mouse IgG2a, κ PE/Dazzle™ 594 isotype control (right).



Human monocyte-derived dendritic cells were stained with anti-human CD301 (CLEC10A) (clone H037G3) PE/Dazzle™ 594 (filled histogram) or mouse IgG2a, κ PE/Dazzle™ 594 isotype control (open histogram).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587