

TotalSeq™-A1010 anti-mouse CD205 (DEC-205) Antibody

Catalog# / Size	138221 / 10 µg
Clone	NLDC-145
Regulatory Status	RUO
Other Names	DEC-205
Isotype	Rat IgG2a, κ
Barcode Sequence	CATATTGGCCGTAGT
Description	CD205, also known as DEC-205, is a 205 kD integral membrane protein homologous to the macrophage mannose receptor. It is a type I cell surface protein that belong to the C-type lectin family. CD205 is expressed at high levels by dendritic cells and thymic epithelial cells. It is also expressed by a number of other cell types, such as B lymphocytes, macrophages, Langerhans cells, bone marrow stromal cells, granulocytes, epithelial cells of pulmonary airways, and the capillaries of the brain. CD205 is a novel endocytic receptor used by dendritic cells and thymic epithelial cells to direct captured antigens from the extracellular space to specialized antigen processing. It mediates antigen uptake and presentation and cross-presentation to T cells. It has been reported that CD205 acts as a recognition receptor for dying cells, potentially provides an important pathway for the uptake of self-antigen in the intrathymic environment, and is involved in peripheral tolerance. Antibody-mediated antigen-targeting via the DEC-205 receptor increases the efficiency of vaccination for T cell immunity.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse lymph node tissue
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-A oligomer under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-A antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
Application Notes	Additional reported applications (for relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections ¹ , Western Blot ¹⁻³ , immunoprecipitation of bone marrow dendritic cell extracts ² , and spatial biology (IBEX) ^{6,7} .

Additional Product Notes TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit [biolegend.com/totalseq](#).

The barcode flanking sequences are CCTTGGCACCCGAGAATTCCA (PCR handle), and BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA*A*A (capture sequence). B represents either C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

Application References

(PubMed link indicates BioLegend citation)

1. Witmer-Pack MD, *et al.* 1995. *Cell. Immun.* 163:157. (IHC, WB)
2. Swiggard WJ, *et al.* 1995. *Cell. Immun.* 165:302. (WB, IP)
3. Bonifaz LC, *et al.* 2004. *J. Exp. Med.* 199:815. (WB)
4. Yamazaki S, *et al.* 2002. *J. Immunol.* 181:6923. (FC)
5. Bankoti J, *et al.* 2010. *Toxicol. Sci.* 115:422. (FC)
6. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
7. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

RRID AB_2832498 (BioLegend Cat. No. 138221)

Antigen Details

Structure	A 205 kD type I transmembrane protein belonging to the C-type lectin family and homologous to the macrophage mannose receptor.
Distribution	Expressed at high levels by dendritic cells and thymic epithelial cells. Also expressed by B lymphocytes, macrophages, Langerhans cells, bone marrow cells and epithelial cells.
Function	Mediates endocytosis, antigen uptake, presentation, and cross-presentation to T cells.
Cell Type	B cells, Dendritic cells, Epithelial cells, Langerhans cells, Macrophages
Biology Area	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Immunology, Innate Immunity
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Jiang WP, <i>et al.</i> 1995. <i>Nature</i> 375:151.2. Small M and Kraal G. 2003. <i>Int. Immunol.</i> 15:197.3. Shrimpton RE, <i>et al.</i> 2009. <i>Mol. Immunol.</i> 46:1229.
Gene ID	17076

Related Protocols

[TotalSeq™-A Antibodies and Cell Hashing with 10x Single Cell 3' Reagent Kit v3 3.1 Protocol](#)

Other Formats

Purified anti-mouse CD205 (DEC-205), Alexa Fluor® 647 anti-mouse CD205 (DEC-205), APC anti-mouse CD205 (DEC-205), PerCP/Cyanine5.5 anti-mouse CD205 (DEC-205), PE/Cyanine7 anti-mouse CD205 (DEC-205), PE anti-mouse CD205 (DEC-205), Biotin anti-mouse CD205 (DEC-205), PE/Dazzle™ 594 anti-mouse CD205 (DEC-205), APC/Fire™ 750 anti-mouse CD205 (DEC-205), TotalSeq™-A1010 anti-mouse CD205 (DEC-205), TotalSeq™-C1010 anti-mouse CD205 (DEC-205)

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