

TotalSeq™-A0113 anti-mouse CD93 (AA4.1, early B lineage) Antibody

Catalog# / Size	136513 / 10 µg
Clone	AA4.1
Regulatory Status	RUO
Other Names	AA4.1, C1qRp, Early B lineage antigen
Isotype	Rat IgG2b, κ
Barcode Sequence	GGTATTCCTGTGGT
Description	CD93 is a 130-140kD C-type lectin like type I transmembrane protein, also known as complement component 1, q subcomponent (C1qR1), C1qRp collectin receptor (C1qRp), or AA4 antigen. It is a receptor expressed on immature B lymphocytes, hematopoietic progenitors and stem cells in adult bone marrow, fetal liver, embryonic yolk sac. CD93 expression level on splenic immature/transitional B cells is much lower than in bone marrow. It is reinduced during plasma cell differentiation and plays an important role in maintaining plasma cells in bone marrow niches. Immature dendritic cells express CD93 and down-regulate this molecule upon maturation, suggesting a role in uptake of particles by DC. It is also expressed on monocytes, macrophages, and endothelial cells. Macrophages from CD93 (-/-) mice had a significant phagocytic defect in the clearance of apoptotic cells <i>in vivo</i> , indicating CD93 may contribute to the <i>in vivo</i> clearance of dying cells. Binding of CD93 to C1q remains controversial.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Pre-B lymphoma 70Z/3
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>
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 BAAA*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. McKearn JP, *et al.* 1984. *J. Immunol.* 132:332
2. Hanihara-Tatsuzawa F, *et al.* 2014. *J Biol Chem.* 289:30925. [PubMed](#)

RRID AB_2750375 (BioLegend Cat. No. 136513)

Antigen Details

Structure	A 130-140 kD C-type lectin like type I transmembrane protein, also known as complement component 1, q subcomponent (C1qR1), C1qRp collectin receptor (C1qRp), or AA4 antigen.
Distribution	Expressed during immature B lymphocytes, hematopoietic progenitors and stem cells in bone marrow, immature dendritic cells, monocytes, macrophages, and endothelial cells.
Function	CD93 plays an important role in maintaining of plasma cells in bone marrow niches. It may play a role in uptake of particles by DC and the <i>in vivo</i> clearance of dying cells by macrophages.
Cell Type	B cells, Dendritic cells, Endothelial cells, Hematopoietic stem and progenitors, Macrophages, Monocytes
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Steinberger P, <i>et al.</i> 2002. <i>J. Leukoc. Biol.</i> 71:1332. Chevrier S, <i>et al.</i> 2009. <i>Proc. Nat. Acad. Sci. U. S. A.</i> 106:38953. Norsworthy PJ, <i>et al.</i> 2004. <i>J. Immunol.</i> 172:34064. Li YS, <i>et al.</i> 1996. <i>Immunity</i> 5:5275. Szilvassy SJ, <i>et al.</i> 1993. <i>Blood</i> 81:2310
Gene ID	17064

Related Protocols

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

Other Formats

FITC anti-mouse CD93 (AA4.1, early B lineage), PE anti-mouse CD93 (AA4.1, early B lineage), PE/Cyanine7 anti-mouse CD93 (AA4.1, early B lineage), APC anti-mouse CD93 (AA4.1, early B lineage), PerCP/Cyanine5.5 anti-mouse CD93 (AA4.1, early B lineage), TotalSeq™-A0113 anti-mouse CD93 (AA4.1, early B lineage), TotalSeq™-C0113 anti-mouse CD93 (AA4.1, early B lineage)

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