TotalSeq™-A0054 anti-human CD34 Antibody

Catalog# / Size	343537 / 10 µg
Clone	581
Regulatory Status	RUO
Workshop	V MA27
Other Names	Gp105-120, My10
Isotype	Mouse IgG1, κ
Barcode Sequence	GCAGAAATCTCCCTT
Description	CD34, also known as gp105-120, is a type I monomeric sialomucin-like glycophosphoprotein with an approximate molecular weight of 105-120 kD. Selectively expressed on the majority of hematopoietic stem/progenitor cells, bone marrow stromal cells, capillary endothelial cells, embryonic fibroblasts, and some nervous tissue, CD34 is a commonly used marker to identify human hematopoietic stem/progenitor cells. According to the differential sensitivity to enzymatic cleavage, four groups of epitopes of CD34 have been described. CD34 mediates cell adhesion and lymphocytes homing through binding to L-selectin and E-selectin ligands.

Product Details

Verified Reactivity	Human
Reported Reactivity	Cynomolgus
Antibody Type	Monoclonal
Host Species	Mouse
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	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. 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. 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.
Application Notes	The 581 antibody recognizes the class III group epitope which is resistant to sialidase/glycolyprotease and chymopapain treatment. Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections[5] and immunofluorescence[6].
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 BAAAAAAAAAAAAAAAAAAAAAAAAAAAAA*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. Schlossman SF, *et al.* 1995. *Leukocyte Typing V:White Cell Differentiation Antigen. New York:Oxford University Press.*
2. Felschow DM, *et al.* 2001. *Blood* 97:3768.
3. Rudin CE, *et al.* 1997. *Br. J. Haematol.* 97:488.
4. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
5. Skowasch D, *et al.* 2003. *Cardiovasc Res.* 60:684. (IHC)
6. Umland O, *et al.* 2003. *J. Histochem. Cytochem.* 51:977. (IF)

Product Citations

1. Bachireddy P, *et al.* 2021. Cell Rep. 37:109992. PubMed
2. Stuart T, *et al.* 2019. Cell. 177:1888. PubMed
3. Witkowski MT, *et al.* 2020. Cancer Cell. 37:867. PubMed
4. Guilliams M, *et al.* 2022. Cell. 185:379. PubMed
5. Gomez-Collignon A, *et al.* 2022. Eur Cell Mater. 43:1. PubMed
6. Hao Y, *et al.* 2021. Cell. 184:3573. PubMed
7. Lavaert M, *et al.* 2020. Immunity. 52(6):1088-1104. PubMed

RRID

AB_2749972 (BioLegend Cat. No. 343537)

Antigen Details

Structure

105-120 kD single chain mucin-like glycoprotein

Distribution

Hematopoietic stem/progenitor cells, bone marrow stromal cells, endothelial cells, embryonic fibroblasts

Function

Cell adhesion

Ligand/Receptor

L-selectin, E-selectin

Cell Type

Endothelial cells, Fibroblasts, Hematopoietic stem and progenitors

Biology Area

Cell Biology, Immunology, Neuroinflammation, Neuroscience, Stem Cells

Molecular Family

CD Molecules

Antigen References

1. Krause DS, *et al.* 1996. *Blood* 87:1.
2. Puri KD, *et al.* 1995. *J. Cell Biol.* 131:261.
3. Zola H, *et al.* 2007. *Leukocyte and Stromal Cell Molecules:The CD Markers.* John Wiley & Sons Inc, Hoboken New Jersey.

Gene ID

947

Related Protocols

TotalSeq™-A Antibodies and Cell Hashing with 10x Single Cell 3' Reagent Kit v3 3.1 Protocol

Other Formats

Purified anti-human CD34, FITC anti-human CD34, PE anti-human CD34, Alexa Fluor® 647 anti-human CD34, APC anti-human CD34, Pacific Blue™ anti-human CD34, APC/Cyanine7 anti-human CD34, PE/Cyanine7 anti-human CD34, Alexa Fluor® 488 anti-human CD34, PerCP anti-human CD34, PerCP/Cyanine5.5 anti-human CD34, Biotin anti-human CD34, Alexa Fluor® 700 anti-human CD34, Brilliant Violet 510™ anti-human CD34, Purified anti-human CD34 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD34, APC/Fire™ 750 anti-human CD34, TotalSeq™-A0054 anti-human CD34, TotalSeq™-B0054 anti-human CD34, TotalSeq™-C0054 anti-human CD34, TotalSeq™-D0054 anti-human CD34, Spark Red™ 718 anti-human CD34

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