

Brilliant Violet 421™ anti-human CD141 (Thrombomodulin) Antibody

Catalog# / Size	344113 / 25 tests 344114 / 100 tests
Clone	M80
Regulatory Status	RUO
Other Names	Thrombomodulin, TM, THRM, THBD, Fetomodulin, BDCA-3
Isotype	Mouse IgG1, κ
Description	CD141 is a 75 kD, single chain, type I membrane glycoprotein also known as thrombomodulin, TM, THRM, THBD, and fetomodulin. CD141 is an important cofactor in the protein C anticoagulant system. After binding to its ligand thrombin, CD141 activates protein C, which degrades clotting factors Va and VIIIa, and as a consequence the amount of thrombin is reduced. CD141 is expressed on macrophages, monocytes, a subpopulation of myeloid dendritic cells, vascular endothelial cells, and keratinocytes. Besides anti-coagulation function, CD141 is also involved in embryonic and atherosclerotic plaque development.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon
Antibody Type	Monoclonal
Host Species	Mouse
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 Brilliant Violet 421™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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	<p>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.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)
Product Citations	<ol style="list-style-type: none">Mulder K, <i>et al.</i> 2021. Immunity. 54(8):1883-1900.e5. PubMedZaal A <i>et al.</i> 2017. Frontiers in immunology. 0.901388889. PubMedJordan S, <i>et al.</i> 2020. Cell. 178(5):1102-1114.e17.. PubMedMotwani MP, <i>et al.</i> 2018. JCI Insight. 3:e94463. PubMedMolina MS, <i>et al.</i> 2021. Front Immunol. 12:699128. PubMed

RRID AB_2562956 (BioLegend Cat. No. 344113)
AB_2563858 (BioLegend Cat. No. 344114)

Antigen Details

Structure	Single chain, type I membrane glycoprotein, 75 kD
Distribution	Macrophages, monocytes, subset of myeloid dendritic cells, vascular endothelial cells, keratinocytes
Function	After thrombin binding, CD141 activates protein C, which degrades clotting factors Va and VIIIa and reduces the amount of thrombin generated.
Interaction	Protein C, Thrombin-activatable fibrinolysis inhibitor (TAFI), Platelet factor 4 (PF4)
Ligand/Receptor	Thrombin
Cell Type	Dendritic cells, Endothelial cells, Macrophages, Monocytes
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Suzuki K, <i>et al.</i> 1987. <i>EMBO J.</i> 6:1891.2. Esmon CT, <i>et al.</i> 1989. <i>J. Biol. Chem.</i> 264:4743.3. Delvaeye M, <i>et al.</i> 2009. <i>N. Engl. J. Med.</i> 361:345.4. Shi CS, <i>et al.</i> 2008. <i>Blood</i> 112:3661.5. Chen LC, <i>et al.</i> 2009. <i>J. Infect.</i> 58:368.
Gene ID	7056

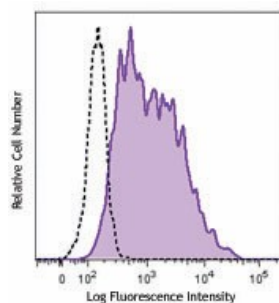
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-human CD141 (Thrombomodulin), PE anti-human CD141 (Thrombomodulin), APC anti-human CD141 (Thrombomodulin), Biotin anti-human CD141 (Thrombomodulin), PE/Cyanine7 anti-human CD141 (Thrombomodulin), PerCP/Cyanine5.5 anti-human CD141 (Thrombomodulin), Brilliant Violet 421™ anti-human CD141 (Thrombomodulin), Brilliant Violet 785™ anti-human CD141 (Thrombomodulin), Brilliant Violet 605™ anti-human CD141 (Thrombomodulin), PE/Dazzle™ 594 anti-human CD141 (Thrombomodulin), TotalSeq™-A0163 anti-human CD141 (Thrombomodulin), Alexa Fluor® 647 anti-human CD141 (Thrombomodulin), TotalSeq™-C0163 anti-human CD141 (Thrombomodulin), TotalSeq™-B0163 anti-human CD141 (Thrombomodulin), KIRAVIA Blue 520™ anti-human CD141 (Thrombomodulin), TotalSeq™-D0163 anti-human CD141 (Thrombomodulin), PE/Fire™ 810 anti-human CD141 (Thrombomodulin)

Product Data



LPS-stimulated (overnight) human peripheral blood monocytes were stained with CD141 (clone M80) Brilliant Violet 421™ (filled histogram) or mouse IgG1, κ Brilliant Violet 421™ isotype control (open histogram). Data shown was gated on monocyte population.

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