abcam

ab326506

PE Anti-CD38 antibody [HIT2]

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.098% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	HIT2
Purification technique	Size-exclusion chromatography
Specificity	The mouse monoclonal antibody HIT2 reacts with an extracellular epitope of CD38, a 45 kDa type II transmembrane glycoprotein strongly expressed mainly on plasma cells and activated T and B lymphocytes; it is an antigenic marker of lymphoid cells. Its binding is blocked by daratumumab.
Purification notes	Purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. Unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	Flow cytometry: The reagent is designed for analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests.

Target data

See full target information CD38

Function	Multifunctional transmembrane glycoprotein able to exert enzymatic activities and also to mobilize calcium, to transduce signals, to adhere to hyaluronan and to other ligands. Synthesizes cyclic ADP-ribose (cADPR), a second messenger for glucose-induced insulin secretion (PubMed:7961800, PubMed:8253715). Synthesizes the Ca(2+) mobilizer nicotinate-adenine dinucleotide phosphate, NAADP(+), from 2'-phospho-cADPR and nicotinic acid, as well as from NADP(+) and nicotinic acid. At both pH 5.0 and pH 7.4 preferentially transforms 2'-phospho-cADPR into NAADP(+), while preferentially cleaving NADP(+) to cADPR and ADPRP rather than into NADDP(+) (PubMed:16690024). Has cADPR hydrolase activity (PubMed:7961800, PubMed:8253715). Functions also as a receptor that binds the ligand CD31 on endothelial cells, promoting lymphocyte activation, proliferation, and migration across the endothelial barrier (PubMed:9551996). Involved in the regulation of crucial dendritic cell functions acquired at the mature stage, such as CCL21-driven migration, survival, and Th1-polarizing activity (PubMed:16293598). In lamina propria T lymphocytes, CD38/CD31 cognate interactions initiate a multistep signaling pathway resulting in activation of LCK anf LAT, followed by cytokine release (PubMed:11259373).

Storage

Shipped at conditions	Ambient - Can Ship with Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

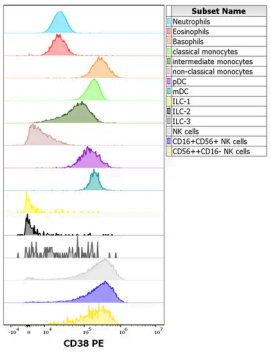
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4 product images

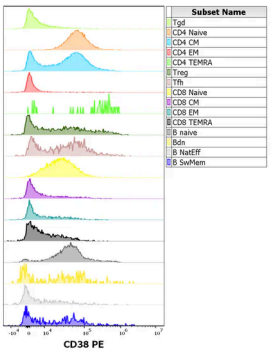


Flow Cytometry - PE Anti-CD38 antibody [HIT2] (ab326506)

CD38 Flow Cytometry staining of Suspension of blood leukocytes isolated from buffy coats using mouse Anti-CD38 antibody

Expression profiling on peripheral blood subsets using ab326506. Innate panel

HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
Suspension of blood leukocytes isolated from buffy coats (2 x 10^6 cells) was added to the mixture of ab326506 (2 µg/ml in stained blood sample) and Monocyte Blocking Buffer, vortexed and incubated for 20 min. Next, optimized backbone antibody panel (HLDA Innate) was added to test tubes, vortexed and incubated for 20 min. The residual erythrocytes were lysed with 2 ml of 10Ч diluted EXCELLYSE Easy solution and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µl of PBS for acquisition.



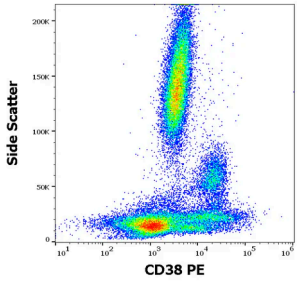
Flow Cytometry - PE Anti-CD38 antibody [HIT2] (ab326506)

CD38 Flow Cytometry staining of Suspension of blood leukocytes isolated from buffy coats using mouse Anti-CD38 antibody

Expression profiling on peripheral blood subsets using ab326506. Adaptive panel

HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
Suspension of blood leukocytes isolated from buffy coats (2 x 10^6 cells) was added to the mixture

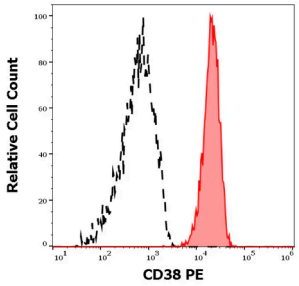
of ab326506 (2 µg/ml in stained blood sample) and Monocyte Blocking Buffer, vortexed and incubated for 20 min. Next, optimized backbone antibody panel (HLDA Adaptive) was added to test tubes, vortexed and incubated for 20 min. The residual erythrocytes were lysed with 2 ml of 10Ч diluted EXCELLYSE Easy solution and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µl of PBS for acquisition.



Flow Cytometry - PE Anti-CD38 antibody [HIT2] (ab326506)

CD38 Flow Cytometry staining of human peripheral whole blood using mouse Anti-CD38 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using ab326506 (20 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - PE Anti-CD38 antibody [HIT2] (ab326506)

CD38 Flow Cytometry staining of human peripheral whole blood using mouse Anti-CD38 antibody

Separation of human monocytes (red-filled) from CD38 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using ab326506 (20 µl reagent / 100 µl of peripheral whole blood).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.