abcam

ab134115

Anti-CD33 antibody [EPR4423]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR4423
Purification technique	Affinity purification Protein A
Dissociation constant	1.76 x 10^{-11} M
Concentration	0.924 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

Target data

See full target information CD33

Function	Sialic-acid-binding immunoglobulin-like lectin (Siglec) that plays a role in mediating cell-cell interactions and in maintaining immune cells in a resting state (PubMed:10611343, PubMed:11320212, PubMed:15597323). Preferentially recognizes and binds alpha-2,3- and more avidly alpha-2,6-linked sialic acid-bearing glycans (PubMed:7718872). Upon engagement of ligands such as C1q or syalylated glycoproteins, two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) located in CD33 cytoplasmic tail are phosphorylated by Src-like kinases such as LCK (PubMed:10887109, PubMed:28325905). These phosphorylations provide docking sites for the recruitment and activation of protein-tyrosine phosphatases PTPN6/SHP-1 and PTPN11/SHP-2 (PubMed:10206955, PubMed:10556798, PubMed:10887109). In turn, these phosphatases regulate downstream pathways through dephosphorylation of signaling molecules (PubMed:10206955, PubMed:10887109). One of the repressive effect of CD33 on monocyte activation requires phosphoinositide 3-kinase/PI3K (PubMed:15597323).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Stable for 12 months at -20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species.

Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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

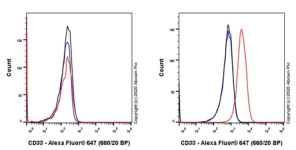
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

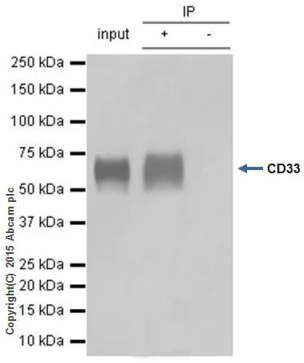
6 product images



Flow Cytometry - Anti-CD33 antibody [EPR4423] (ab134115)

CD33 Flow Cytometry staining using rabbit Anti-CD33 antibody

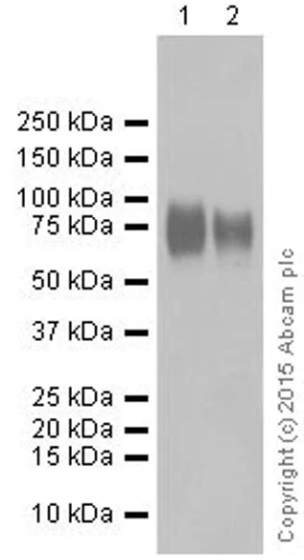
Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte, Left) / THP1 (Human monocytic leukemia monocyte, Right) labeling CD33 with ab134115 at 1/500 dilution (red). Goat anti rabbit IgG (Alexa Fluor® 647, ab150079) at 1/2000 dilution was used as the secondary antibody. Rabbit monoclonal IgG (ab172730) was used as isotype control (Black). Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue).
Negative control: Jurkat.
Gated on viable cells.



Immunoprecipitation - Anti-CD33 antibody [EPR4423] (ab134115)

ab134115 (purified) at 1/60 immunoprecipitating CD33 in 10 µg THP-1 (Lanes 1 and 2, observed at 67-75 kDa). Lane 3 - PBS. For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution. Blocking buffer and concentration: 5% NFDM/TBST
Dilution buffer and concentration: 5% NFDM/TBST
All lanes:
Immunoprecipitation - Anti-CD33 antibody [EPR4423] (ab134115)

Predicted band size: 40 kDa



Western blot - Anti-CD33 antibody [EPR4423] (ab134115)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-CD33 antibody [EPR4423] (ab134115) at 1/5000 dilution

Lane 1:
THP-1 cell lysate at 10 µg

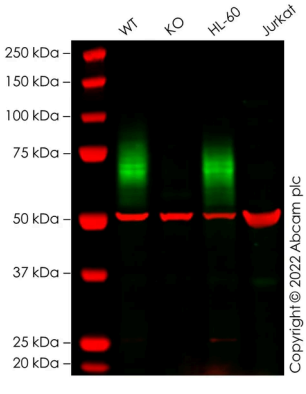
Lane 2:
U937 cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

Predicted band size: 40 kDa

Observed band size: 67 kDa, 75 kDa



Western blot - Anti-CD33 antibody [EPR4423] (ab134115)

False colour image of Western blot: Anti-CD33 antibody [EPR4423] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab134115 was shown to bind specifically to CD33. A band was observed at 60-80 kDa in wild-type THP-1 cell lysates with no signal observed at this size in CD33 knockout cell line ab273831 (knockout cell lysate ab273785). To generate this image, wild-type and CD33 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.

All lanes:
Western blot - Anti-CD33 antibody [EPR4423] (ab134115) at 1/1000 dilution

Lane 1:
Wild-type THP-1 cell lysate at 10 µg

Lane 2:
Western blot - Human CD33 knockout THP-1 cell lysate (ab273785) at 10 µg

Lane 3:
HL-60 cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

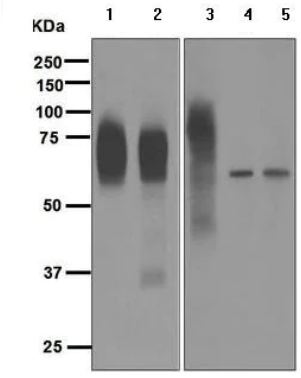
Secondary

All lanes:
Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 40 kDa

Observed band size: 60-80 kDa



Western blot - Anti-CD33 antibody [EPR4423] (ab134115)

All lanes:
Western blot - Anti-CD33 antibody [EPR4423] (ab134115) at 1/1000 dilution

Lane 1:
THP1 cell lysate at 10 µg

Lane 2:
U937 cell lysate at 10 µg

Lane 3:
HL60 cell lysate at 10 µg

Lane 4:
HepG2 cell lysate at 10 µg

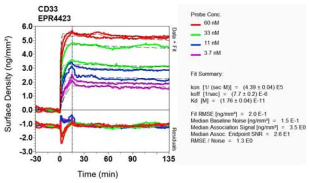
Lane 5:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated antibody at 1/2000 dilution

Predicted band size: 40 kDa

Observed band size: 67-75 kDa



OI-RD Scanning - Anti-CD33 antibody [EPR4423] (ab134115)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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