abcam

ab317589

Anti-CD34 antibody [RM2052] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	RM2052
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse ICC.
Concentration	1.031 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human, Mouse
Dilution info	-

Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

mIHC

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CD34

Function	Possible adhesion molecule with a role in early hematopoiesis by mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. Could act as a scaffold for the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. Presents carbohydrate ligands to selectins.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab317589 is the carrier-free version of ab317588.

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

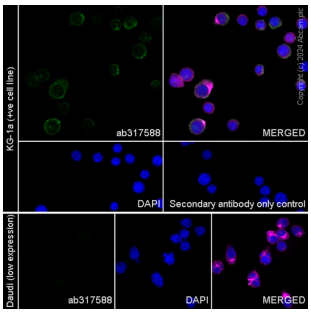
We do not recommend this combination. It is not covered by our product promise.

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.

17 product images



Immunocytochemistry/ Immunofluorescence - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

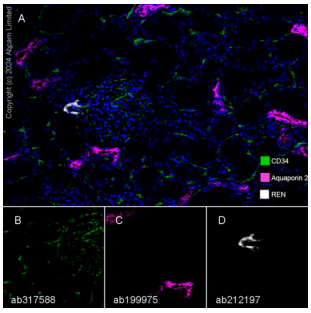
This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized KG-1a (human bone marrow myeloblast) cells labelling CD34 with ab317588 at 1/50 (9.88 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green).

Confocal image showing positive staining in KG-1a cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue).
Low expression: Daudi (PMID: 21286385).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Multiplex immunohistochemistry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

CD34 Multiplex immunohistochemistry staining of Human kidney using rabbit Anti-CD34 antibody

This data was developed using ab317588, the same antibody clone in a different buffer formulation.
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human kidney tissue staining CD34 with ab317588 at a 1/2000 dilution, ab199975 anti-Aquaporin 2 used at 1/4000 dilution and ab212197 anti-Renin used at a 1/4000 dilution.

Panel A: merged staining of anti-CD34 (green; Opal™520), anti-Aquaporin 2 (magenta; Opal™690) and anti-Renin (gray; Opal™570) on human kidney.

Panel B: anti-CD34 staining endothelium in human kidney.

Panel C: anti-Aquaporin 2 staining collecting tubules in human kidney.

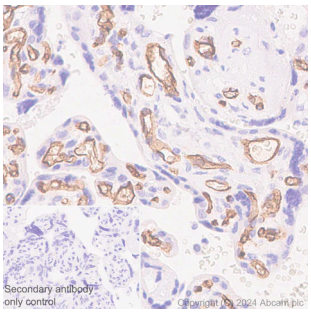
Panel D: anti-Renin staining juxtaglomerular cells in human kidney.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab317588, ab199975 and ab212197 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

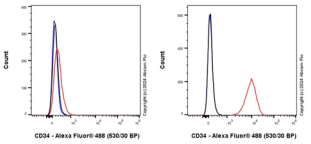
Immunohistochemical analysis of paraffin-embedded Human placenta tissue labeling CD34 with ab317588 at 1/2000 (0.247 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on endothelium of human placenta (PMID: 35263417). The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



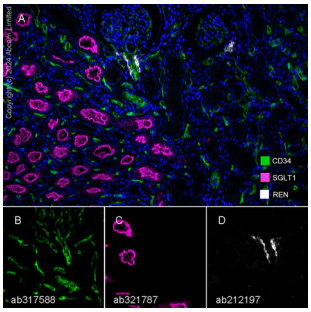
Flow Cytometry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Daudi(human Burkitt's lymphoma lymphoblast, Left) / KG-1a(human bone marrow myeloblast, Right) cells labelling CD34 with ab317588 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cell.
Low expression: Daudi.



Multiplex immunohistochemistry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

CD34 Multiplex immunohistochemistry staining of Human kidney using rabbit Anti-CD34 antibody

This data was developed using ab317588, the same antibody clone in a different buffer formulation.
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human kidney tissue staining CD34 with ab317588 at a 1/2000 dilution, ab321787 anti-SGLT1 used at 1/2000 dilution and ab212197 anti-Renin used at a 1/4000 dilution.

Panel A: merged staining of anti-CD34 (green; Opal™520), anti-SGLT1 (magenta; Opal™690) and anti-Renin (gray; Opal™570) on human kidney.

Panel B: anti-CD34 staining endothelium in human kidney.

Panel C: anti-SGLT1 staining tubules in human kidney.

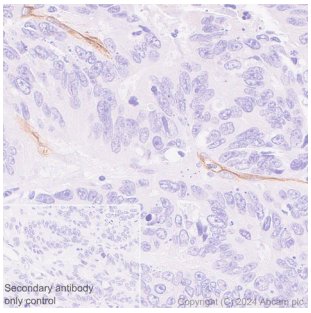
Panel D: anti-Renin staining juxtaglomerular cells in human kidney.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab317588, ab321787 and ab212197 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

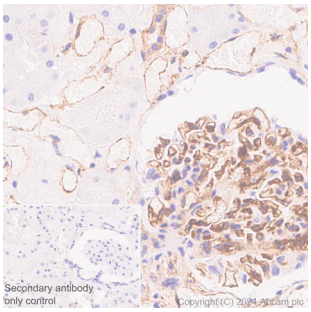
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling CD34 with ab317588 at 1/2000 (0.247 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on endothelium of human colon cancer. The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling CD34 with ab317588 at 1/2000 (0.247 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™

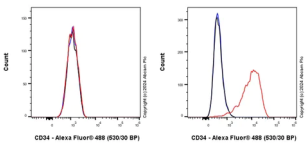
Polymer Refine Detection).

Positive staining on endothelium of human kidney (PMID: 16234507). The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



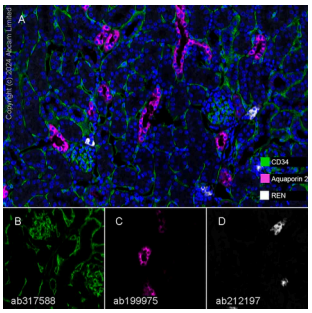
Flow Cytometry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Neuro-2a(mouse neuroblastoma neuroblast, Left) / NIH/3T3(mouse embryonic fibroblast, Right) cells labelling CD34 with ab317588 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cell.
Low expression: Neuro-2a.



Multiplex immunohistochemistry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

CD34 Multiplex immunohistochemistry staining of Mouse kidney using rabbit Anti-CD34 antibody

This data was developed using ab317588, the same antibody clone in a different buffer formulation.
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse kidney tissue staining CD34 with ab317588 at a 1/5000 dilution, ab199975 anti-Aquaporin 2 used at 1/4000 dilution and ab212197 anti-Renin used at a 1/4000 dilution.

Panel A: merged staining of anti-CD34 (green; Opal™520), anti-Aquaporin 2 (magenta; Opal™690) and anti-Renin (gray; Opal™570) on mouse kidney.

Panel B: anti-CD34 staining endothelium in mouse kidney.

Panel C: anti-Aquaporin 2 staining collecting tubules in mouse kidney.

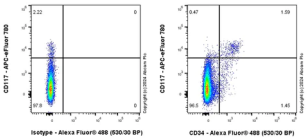
Panel D: anti-Renin staining juxtaglomerular cells in mouse kidney.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab317588, ab199975 and ab212197 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



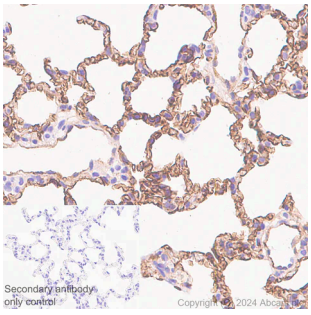
Flow Cytometry - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Mouse bone marrow cells labelling CD34 with ab317588 at 1/500 dilution (0.1ug)/Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Mouse bone marrow are co-stained with CD117 conjugated APC-eFluor 780.
Gated on viable cell.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

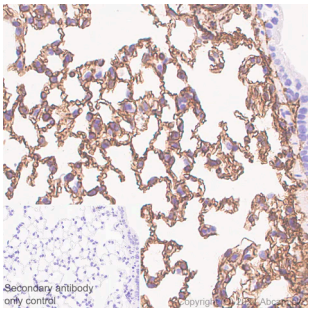
Immunohistochemical analysis of paraffin-embedded Rat lung tissue labeling CD34 with ab317588 at 1/5000 (0.099 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on endothelium of rat lung. The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse lung tissue labeling CD34 with ab317588 at 1/5000 (0.099 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

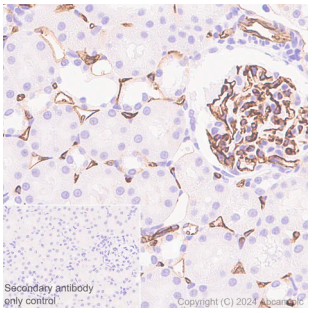
Positive staining on endothelium of mouse lung. The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling CD34 with ab317588 at 1/5000 (0.099 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

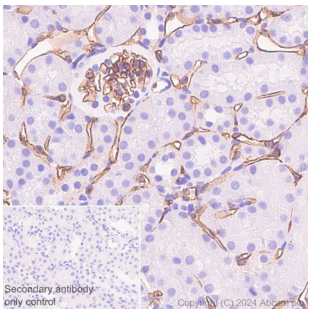
Positive staining on endothelium of rat kidney. The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling CD34 with ab317588 at 1/5000 (0.099 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™

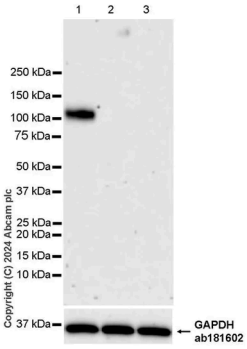
Polymer Refine Detection).

Positive staining on endothelium of mouse kidney. The section was incubated with ab317588 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins



Western blot - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Low expression: Daudi (PMID: 21286385), HuT-78.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 37181754, 29296932).

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CD34 antibody [RM2052] (ab317588) at 1/1000 dilution

Lane 1:
KG-1a (human bone marrow myeloblast) whole cell lysate at 20 µg

Lane 2:
Daudi (human Burkitts lymphoma lymphoblast) whole cell lysate at 20 µg

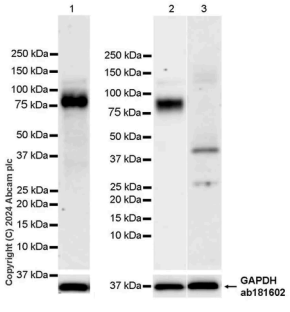
Lane 3:
HuT-78 (human Sezary syndrome cutaneous T lymphocyte) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 80-120 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Low expression: liver (PMID:1709048).

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 37181754, 29296932).

The identity of the lower MW band at approximately 40 kDa (in lane 3) is unknown.

Blocking and diluting buffer and concentration: 5% NFDM/TBST..

Exposure time: Lane 2: 10 seconds, lanes 1 and 3: 180 seconds
All lanes:
Western blot - Anti-CD34 antibody [RM2052] (ab317588) at 1/1000 dilution

Lane 1:
Mouse testis tissue lysate at 20 µg

Lane 2:
Mouse lung tissue lysate at 20 µg

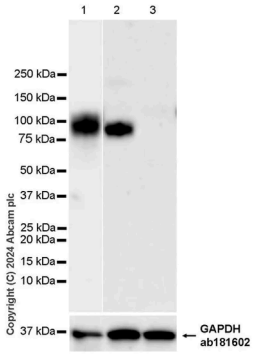
Lane 3:
Mouse liver tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Observed band size: 80-120 kDa, 36 kDa



Western blot - Anti-CD34 antibody [RM2052] - BSA and Azide free (ab317589)

This data was developed using ab317588, the same antibody clone in a different buffer formulation.

Low expression: Neuro-2a.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 37181754, 29296932).

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Exposure time: Lane 1: 15 seconds, lanes 2-3: 180 seconds

All lanes:
Western blot - Anti-CD34 antibody [RM2052] (ab317588) at 1/1000 dilution

Lane 1:
bEnd.3 (mouse brain endothelial cell) whole cell lysate at 20 µg

Lane 2:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 3:
Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 80-120 kDa, 36 kDa

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