


Product datasheet

Anti-CD133 antibody [EPR16508] ab222782

KO VALIDATED Recombinant RabMAb

★★★★★ [1 Abreviews](#) [28 References](#) [8 Images](#)

Overview

Product name	Anti-CD133 antibody [EPR16508]
Description	Rabbit monoclonal [EPR16508] to CD133
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Non human primates 
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HAP1, Caco-2 (Human colorectal adenocarcinoma epithelial cell), NCCIT (Human pluripotent embryonic carcinoma epithelial cell) and HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate. Human fetal pancreas and fetal kidney lysate. IHC-P: Human pancreas and kidney tissue. Human bladder cancer tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR16508
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab222782 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/2000. Predicted molecular weight: 97 kDa.
IHC-P	★★★★★ (1)	1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	May play a role in cell differentiation, proliferation and apoptosis (PubMed:24556617). Binds cholesterol in cholesterol-containing plasma membrane microdomains and may play a role in the organization of the apical plasma membrane in epithelial cells. During early retinal development acts as a key regulator of disk morphogenesis. Involved in regulation of MAPK and Akt signaling pathways. In neuroblastoma cells suppresses cell differentiation such as neurite outgrowth in a RET-dependent manner (PubMed:20818439).
Tissue specificity	Isoform 1 is selectively expressed on CD34 hematopoietic stem and progenitor cells in adult and fetal bone marrow, fetal liver, cord blood and adult peripheral blood. Isoform 1 is not detected on other blood cells. Isoform 1 is also expressed in a number of non-lymphoid tissues including retina, pancreas, placenta, kidney, liver, lung, brain and heart. Found in saliva within small membrane particles. Isoform 2 is predominantly expressed in fetal liver, skeletal muscle, kidney, and heart as well as adult pancreas, kidney, liver, lung, and placenta. Isoform 2 is highly expressed in fetal liver, low in bone marrow, and barely detectable in peripheral blood. Isoform 2 is expressed on hematopoietic stem cells and in epidermal basal cells (at protein level). Expressed in adult retina by rod and cone photoreceptor cells (at protein level).
Involvement in disease	Retinitis pigmentosa 41 Cone-rod dystrophy 12 Stargardt disease 4 Retinal macular dystrophy 2
Sequence similarities	Belongs to the prominin family.
Post-translational modifications	Isoform 1 and isoform 2 are glycosylated. Acetylation at Lys-225, Lys-257 and Lys-264 by NAT8 and NAT8B may control PROM1 protein expression and its function in cell apoptosis.
Cellular localization	Apical cell membrane. Cell projection, microvillus membrane. Cell projection, cilium, photoreceptor outer segment. Endoplasmic reticulum. Endoplasmic reticulum-Golgi intermediate compartment. Found in extracellular membrane particles in various body fluids such as cerebrospinal fluid, saliva, seminal fluid and urine.

Images



Western blot - Anti-CD133 antibody [EPR16508]
(ab222782)

All lanes : Anti-CD133 antibody [EPR16508] (ab222782) at 1/2000 dilution

Lane 1 : Wild-type HAP1 cell lysate

Lane 2 : PROM1 knockout HAP1 cell lysate

Lysates/proteins at 40 µg per lane.

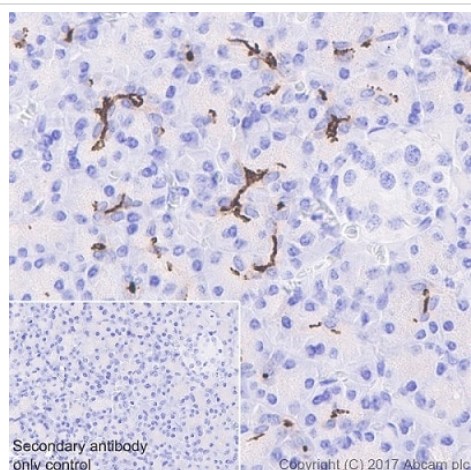
Performed under reducing conditions.

Predicted band size: 97 kDa

Observed band size: 110 kDa

Exposure time: 8 minutes

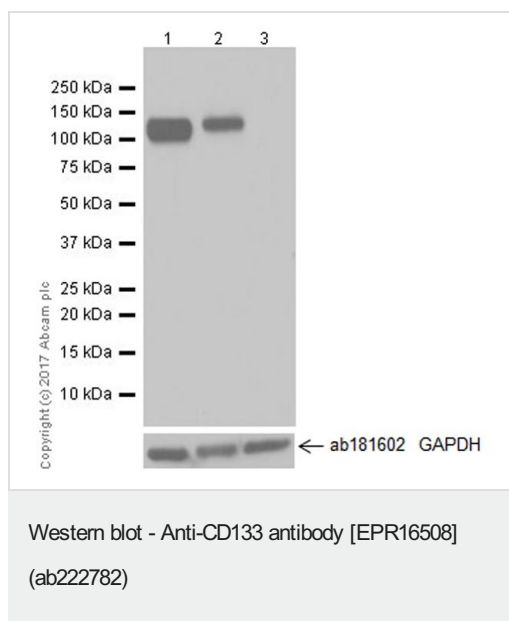
ab222782 was shown to react with CD133 in wild-type HAP1 cells in western blot. Loss of signal was observed when PROM1 knockout sample was used. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab222782 overnight at 4°C at a 1 in 2000 dilution. Blots were incubated with HRP conjugated Goat anti-Rabbit (H+L) secondary antibody at 1/5000 for 1 hour at room temperature before development with ECL reagent and imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD133 antibody [EPR16508] (ab222782)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling CD133 with ab222782 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP)(ready use). Apical/endoluminal staining of human pancreatic ducts, and negative on Langerhans cells of the islets (PMID: 18261235). Counter stained with Hematoxylin. Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ready to use).



All lanes : Anti-CD133 antibody [EPR16508] (ab222782) at 1/10000 dilution

Lane 1 : Caco-2 (Human colorectal adenocarcinoma epithelial cell), whole cell lysate

Lane 2 : HT-29 (Human colorectal adenocarcinoma epithelial cell), whole cell lysate

Lane 3 : HeLa (Human cervix adenocarcinoma epithelial cell), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

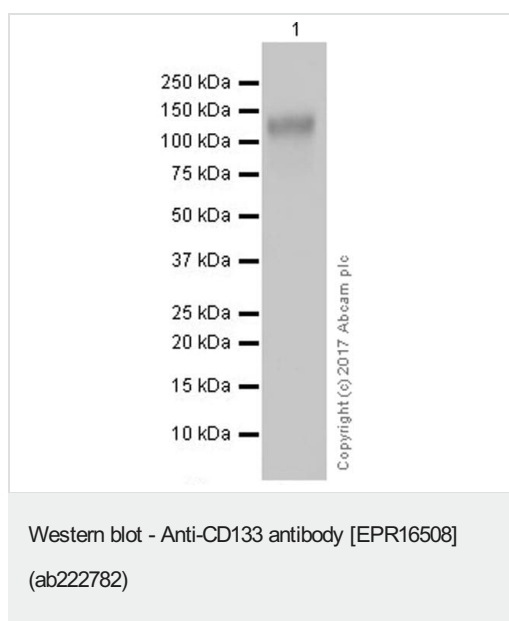
Predicted band size: 97 kDa

Exposure time: 5 seconds

Negative control: HeLa (PMID 9389721).

The MW observed is consistent with the literature (PMID 20717901; PMID 18645205).

Blocking buffer: 5% NFDM/TBST.



Anti-CD133 antibody [EPR16508] (ab222782) at 1/10000 dilution + NCCIT (Human pluripotent embryonic carcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

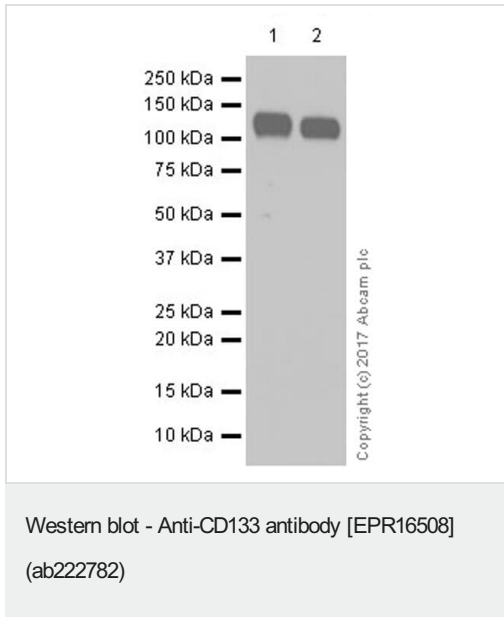
Predicted band size: 97 kDa

Exposure time: 15 seconds

Blocking buffer: 5% NFDM/TBST.

The MW observed is consistent with the literature (PMID 20717901;

PMID 18645205).



All lanes : Anti-CD133 antibody [EPR16508] (ab222782) at 1/2000 dilution

Lane 1 : Human fetal pancreas lysate

Lane 2 : Human fetal kidney lysate

Lysates/proteins at 20 µg per lane.

Secondary

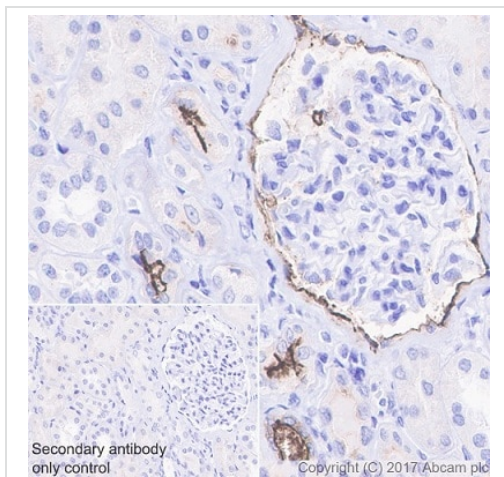
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 97 kDa

Exposure time: 3 minutes

Blocking buffer: 5% NFDM/TBST.

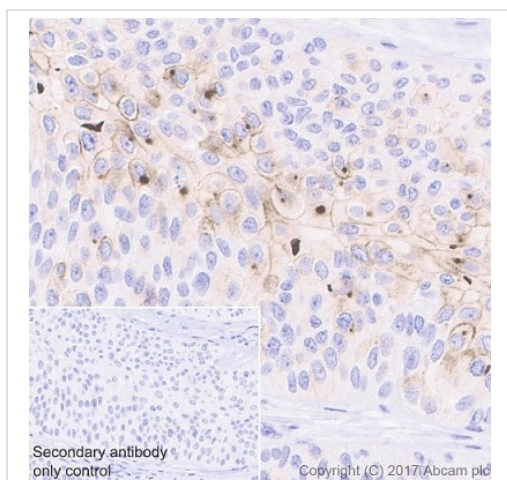
The MW observed is consistent with the literature (PMID 20717901; PMID 18645205).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD133 antibody [EPR16508] (ab222782)

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling CD133 with ab222782 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ready to use). Membranous staining on parietal layer of Bowman's capsule and apical staining on renal tubules in human kidney (PMID: 19092120). Counter stained with Hematoxylin. Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ready to use).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD133 antibody [EPR16508] (ab222782)

Immunohistochemical analysis of paraffin-embedded human bladder cancer tissue labeling CD133 with ab222782 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ready to use). Membranous staining on human bladder cancer tumor cells (PMID: 22899341). Counter stained with Hematoxylin. Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ready to use).

Why choose a recombinant antibody?

<p>Research with confidence Consistent and reproducible results</p>	<p>Long-term and scalable supply Recombinant technology</p>
<p>Success from the first experiment Confirmed specificity</p>	<p>Ethical standards compliant Animal-free production</p>

Anti-CD133 antibody [EPR16508] (ab222782)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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