

Anti-CD133 antibody - Stem Cell Marker ab19898

★★★★★ 27 Abreviews 245 References 6 图像

概述	
产品名称	Anti-CD133抗体- Stem Cell Marker
描述	兔多克隆抗体to CD133 - Stem Cell Marker
宿主	Rabbit
特异性	From Jan 2024, QC testing of replenishment batches of this polyclonal changed. All tested and expected application and reactive species combinations are still covered by our Abcam product promise. However, we no longer test all applications. For more information on a specific batch, please contact our Scientific Support who will be happy to help. You may also be interested in our alternative recombinant antibody, ab284389 .
经测试应用	适用于: ICC, ICC/IF, Flow Cyt, IHC-P, IHC-Fr, IP, WB
种属反应性	与反应: Mouse, Rat, Human
免疫原	Synthetic peptide corresponding to Human CD133 (C terminal) conjugated to keyhole limpet haemocyanin. Database link: O43490
阳性对照	WB: Caco 2, HeLa and human embryonic stem cell lysates. ICC/IF: Caco-2 cells
常规说明	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>
性能	
形式	Liquid
存放说明	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
纯度	Immunogen affinity purified

克隆 多克隆
同种型 IgG

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab19898于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC	★★★★★ (1)	Use at an assay dependent concentration.
ICC/IF	★★★★★ (6)	Use at an assay dependent concentration.
Flow Cyt	★★★★★ (3)	Use at an assay dependent concentration.
IHC-P	★★★★★ (11)	Use at an assay dependent concentration.
IHC-Fr	★★★★★ (4)	Use at an assay dependent concentration. PubMed: 23769181
IP		1/30.
WB	★★★★★ (2)	Use a concentration of 1 - 2 µg/ml. Detects a band of approximately 110 kDa (predicted molecular weight: 97 kDa).

靶标

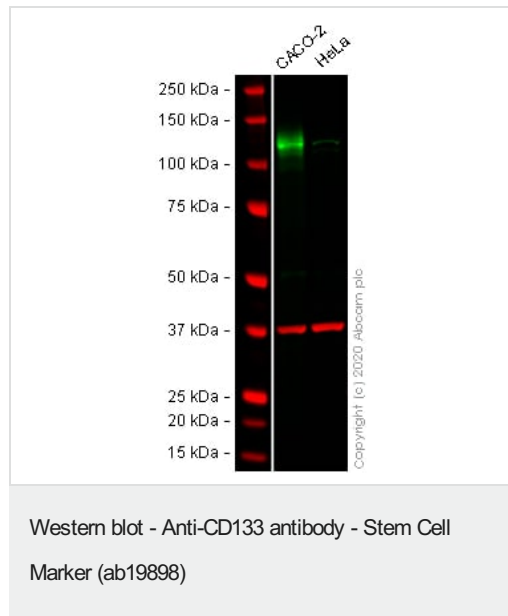
功能	May play a role in cell differentiation, proliferation and apoptosis (PubMed:24556617). Binds cholesterol in cholesterol-containing plasma membrane microdomains and may play a role in the organization of the apical plasma membrane in epithelial cells. During early retinal development acts as a key 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).
组织特异性	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).
疾病相关	Retinitis pigmentosa 41 Cone-rod dystrophy 12 Stargardt disease 4 Retinal macular dystrophy 2
序列相似性	Belongs to the prominin family.
翻译后修饰	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.

细胞定位

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.

图片



All lanes : Anti-CD133 antibody - Stem Cell Marker (ab19898) at 1 $\mu\text{g/ml}$

Lane 1 : Caco 2 cell lysate

Lane 2 : HeLa cell lysate

Lysates/proteins at 20 μg per lane.

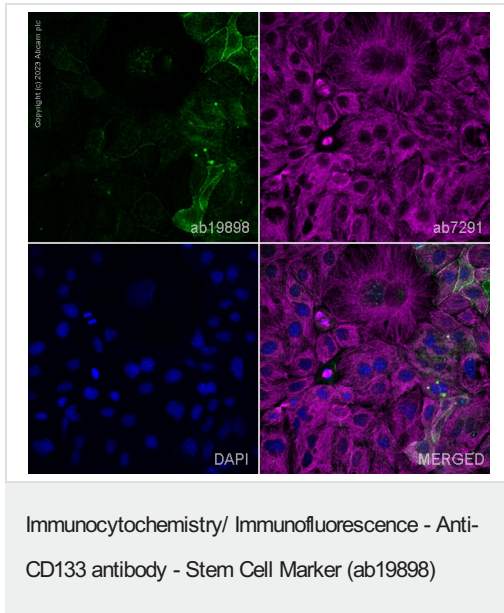
Performed under reducing conditions.

Predicted band size: 97 kDa

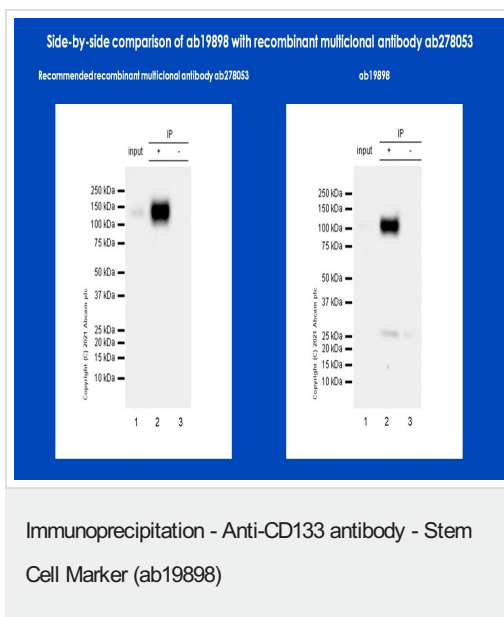
Observed band size: 97 kDa

Lanes 1 - 2: Merged signal (red and green). Green - ab19898 observed at 97 kDa. Red - loading control, **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab19898 was shown to react with CD133 in western blot. Membranes were blocked in 3% milk in TBS-T (0.1% Tween[®]) before incubation with ab19898 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at 1 $\mu\text{g/ml}$ and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



ab19898 staining CD133 in Caco-2 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab19898 at 1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor®594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunoprecipitation side-by-side comparison with the recombinant multiclonal antibody **ab278053**

This immunoprecipitation image is a comparison between ab19898 and the alternative recombinant multiclonal antibody **ab278053**.

Left side - Recombinant multiclonal to CD133 - **ab278053**
CD133 was immunoprecipitated from 0.35 mg Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate with **ab278053** at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using **ab278053** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

Lane 1: Caco-2 whole cell lysate 10 µg.

Lane 2: **ab278053** IP in Caco-2 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab278053** in Caco-2 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 3 seconds.

Right side - Polyclonal antibody to [CD133] - ab19898

Same testing conditions as **ab278053**.

Why choose a recombinant antibody?

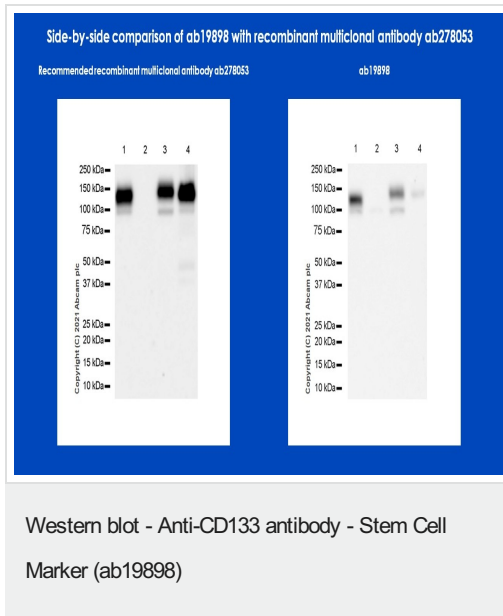
Research with confidence - consistent and reproducible results with

every batch

Long-term and scalable supply - powered by recombinant technology for fast production

Success from the first experiment - confirmed specificity through extensive validation

Ethical standards compliant - production is animal-free



Western blot side-by-side comparison with the recombinant monoclonal antibody **ab278053**

This Western blot image is a comparison between ab19898 and the alternative recombinant monoclonal antibody **ab278053**.

Left side - Recombinant monoclonal to CD133 - **ab278053**

All lanes : Anti-CD133 antibody [RM1002] (**ab278053**) at 1/1000 dilution

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

Lane 2 : HEK-293T (Human embryonic kidney epithelial cell) whole cell lysate

Lane 3 : NCCIT (Human pluripotent embryonic carcinoma epithelial cell) whole cell lysate

Lane 4 : HT-29 (Human colorectal 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

Observed band size: 120 kDa

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

Exposure time: 26 seconds.

Right side - Polyclonal antibody to [CD133] - ab19898

Same testing conditions as **ab278053**.

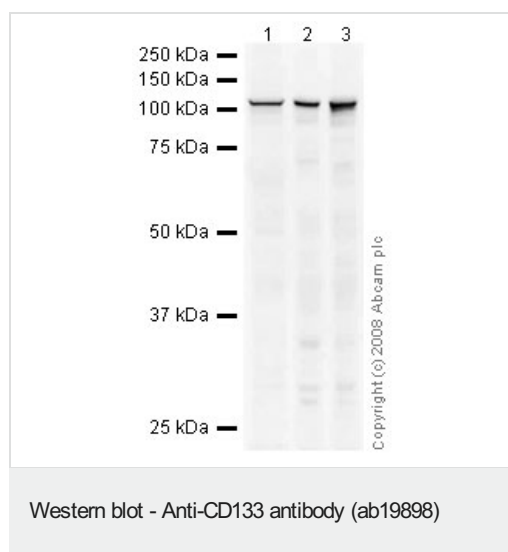
Why choose a recombinant antibody?

Research with confidence - consistent and reproducible results with every batch

Long-term and scalable supply - powered by recombinant technology for fast production

Success from the first experiment - confirmed specificity through extensive validation

Ethical standards compliant - production is animal-free



All lanes : Anti-CD133 antibody - Stem Cell Marker (ab19898) at 1 µg/ml

Lane 1 : MEL-1 (Human embryonic stem cell, male cell line) Whole Cell Lysate ([ab27198](#))

Lane 2 : HT-29 whole cell lysate ([ab3952](#))

Lane 3 : Caco-2 whole cell lysate ([ab3950](#))

Lysates/proteins at 10 µg per lane.

Secondary

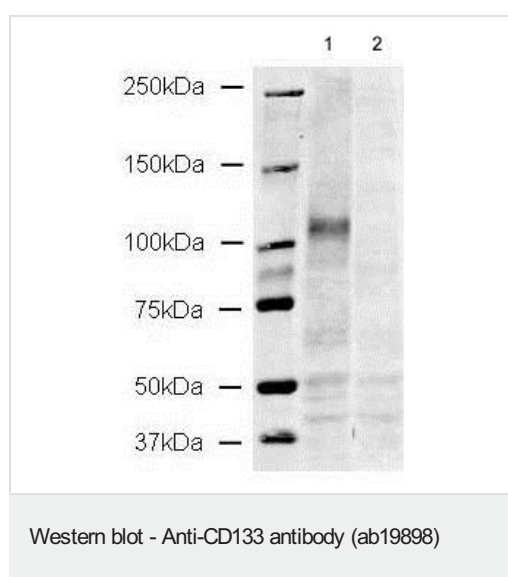
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 97 kDa

Observed band size: 110 kDa

ab19898 contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.



All lanes : Anti-CD133 antibody - Stem Cell Marker (ab19898) at 1 µg/ml

Lane 1 : Human Embryonic Stem Cell Lysate

Lane 2 : Human Embryonic Stem Cell Lysate with CD133 peptide ([ab20651](#)) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

Predicted band size: 97 kDa

Anti-CD133 antibody ab19898 detects a band corresponding to the expected size of CD133 in Human Embryonic Stem Cell Lysate using Western Blotting. It is likely that the band runs higher than the

predicted MW of CD133 due to glycosylation of CD133. In mouse neural stem cell and mouse embryonic stem cell lysate this ~110 kDa band was not detected but a reproducible band of ~30 kDa was seen. This could represent a cleavage product but it may also be that the ~30 kDa band represents non-specific binding by ab19898. However, ab19898 has been shown to recognise mouse neural stem cells using ICC. Blocking using the immunising peptide removed both of these bands.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.cn/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors