abcam

ab267788

Anti-Poliovirus Receptor/PVR antibody [EPR22672-151]

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	EPR22672-151
Purification technique	Affinity purification Protein A
Concentration	0.509 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information PVR

Function	Mediates NK cell adhesion and triggers NK cell effector functions. Binds two different NK cell receptors: CD96 and CD226. These interactions accumulates at

the cell-cell contact site, leading to the formation of a mature immunological synapse between NK cell and target cell. This may trigger adhesion and secretion of lytic granules and IFN-gamma and activate cytotoxicity of activated NK cells. May also promote NK cell-target cell modular exchange, and PVR transfer to the NK cell. This transfer is more important in some tumor cells expressing a lot of PVR, and may trigger fratricide NK cell activation, providing tumors with a mechanism of immunoevasion. Plays a role in mediating tumor cell invasion and migration. (Microbial infection) Acts as a receptor for poliovirus. May play a role in axonal transport of poliovirus, by targeting virion-PVR-containing endocytic vesicles to the microtubular network through interaction with DYNLT1. This interaction would drive the virus-containing vesicle to the axonal retrograde transport. (Microbial infection) Acts as a receptor for Pseudorabies virus. (Microbial infection) Is prevented to reach cell surface upon infection by Human cytomegalovirus /HHV-5, presumably to escape immune recognition of infected cell by NK cells.

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	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Poliovirus Receptor (PVR) also known as CD155 is a cell surface glycoprotein with a molecular mass of approximately 70 kDa. This receptor is expressed on a variety of cell types including epithelial and endothelial cells immune cells and fibroblasts. Another name for PVR is Necl-5 which falls under the nectin-like molecule family. It acts as an adhesion molecule and contributes to cellular signaling and junctional complexes. The expression of PVR is widespread across multiple tissues but it exhibits stronger expression in areas such as the skin and the gastrointestinal tract.
Biological function summary	The Poliovirus Receptor plays meaningful roles in immune response modulation and cell-cell adhesion. PVR interacts with components of the immune system and forms complexes with other proteins like CD226 and TIGIT. These interactions help regulate immune cell activities especially in the context of natural killer (NK) cells and T-cells. The CD155 protein also links to migration and proliferation processes which are essential for tissue formation and repair.
Pathways	PVR is involved in the regulation of immune and signaling pathways. It fits into pathways like NK cell activation and T-cell inhibitory signaling which are important for maintaining immune tolerance and preventing autoimmunity. In these pathways PVR interacts closely with other immunoregulatory proteins including CD226 and TIGIT. The partnership of PVR with these proteins shapes the delicate balance between immune activation and suppression demonstrating a clear role in immune homeostasis.
Associated diseases and disorders	PVR relates to conditions such as cancer and viral infection. Its overexpression or altered signaling has been observed in several cancers where it may contribute to tumor growth and immune evasion. The interaction between PVR and its related protein TIGIT can affect antitumor immune responses complicating cancer progression. Additionally as its name suggests PVR binds to the poliovirus facilitating viral entry and spread during infection. This highlights the importance of PVR not only in pathogenic interactions but also in broader immune response contexts.

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.

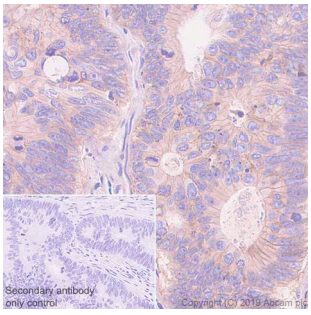
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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7 product images

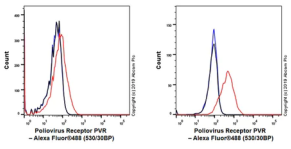


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Poliovirus Receptor/PVR with ab267788 at 1/500 dilution (1.01µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining in human colon cancer (PMID: 28816021,11454801). Counterstained with hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

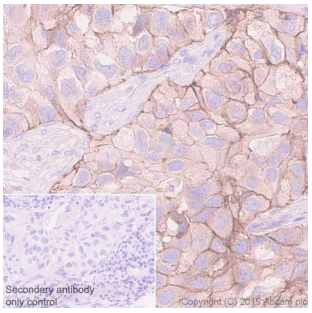


Flow Cytometry - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Flow Cytometry staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Flow cytometric analysis of Raji (Human Burkitt's lymphoma B lymphocyte) (Left panel) and A549 (Human lung carcinoma epithelial cell) (Right panel) labeling Poliovirus Receptor/PVR with ab267788 at 1/50 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Negative control: Raji (PMID:31500665).

Gated on viable cells.

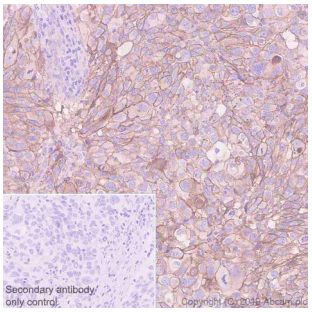


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue labeling Poliovirus Receptor/PVR with ab267788 at 1/500 dilution (1.01µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining in human lung cancer (PMID:20331633). Counterstained with hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

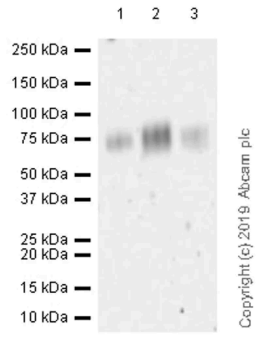
Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling Poliovirus Receptor/PVR with ab267788 at 1/500 dilution (1.01µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining in human breast cancer (PMID:31035013). Counterstained with hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Western blot staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 3 minutes.

PVR/CD155 is a glycoprotein. The molecular weight observed is consistent with what has been described in the literature (PMID:17893876,11454801).

This blot was developed using a higher sensitivity ECL substrate.

All lanes:
Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788) at 1/1000 dilution

Lane 1:
Human placenta lysate at 20 µg

Lane 2:
Human lung cancer lysate at 20 µg

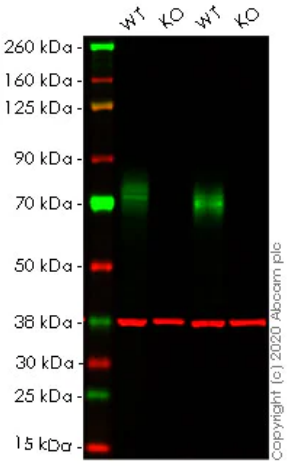
Lane 3:
Human colon cancer lysate at 20 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/2000 dilution

Predicted band size: 45 kDa

Observed band size: 70 kDa



Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Western blot staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Lanes 1- 4: Merged signal (red and green). Green - ab267788 observed at 70 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.
ab267788 was shown to react with Poliovirus Receptor/PVR in wild-type HEK-293T cells in western blot. Loss of signal was observed when knockout cell line ab266102 (knockout cell lysate ab257622) was used. Wild-type HEK-293T and PVR knockout HEK-293T cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab267788 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788) at 1/1000 dilution

Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
PVR knockout HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human PVR (Poliovirus Receptor) knockout HEK-293T cell line (ab266102)

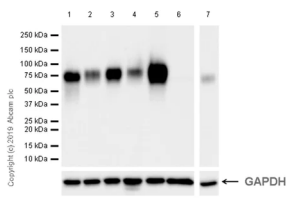
Lane 3:
Wild-type A549 cell lysate at 20 µg

Lane 4:
PVR knockout A549 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 45 kDa

Observed band size: 70 kDa



Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788)

Poliovirus Receptor/PVR Western blot staining using rabbit Anti-Poliovirus Receptor/PVR antibody

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 10 seconds.

Negative control: Raji (PMID: 28829151, 31500665).

PVR/CD155 is a glycoprotein. The molecular weight observed is consistent with what has been described in the literature (PMID:17893876,11454801).
All lanes:
Western blot - Anti-Poliovirus Receptor/PVR antibody [EPR22672-151] (ab267788) at 1/1000 dilution

Lane 1:
A549 (human lung carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
WI-38 (human fetal lung fibroblast), whole cell lysate at 20 µg

Lane 3:
HT-1080 (human fibrosarcoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
U-87 MG (human glioblastoma-astrocytoma epithelial cell), whole cell lysate at 20 µg

Lane 5:
HUVEC (human umbilical vein endothelial cell), whole cell lysate at 20 µg

Lane 6:
Raji (human Burkitt's lymphoma B lymphocyte), whole cell lysate at 20 µg

Lane 7:
MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 45 kDa

Observed band size: 70 kDa

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