abcam

ab308068

Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20]

Recombinant | RabMAb | 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	EPR27186-20
Purification technique	Affinity purification Protein A
Specificity	The immunogen has been designed based on the Norovirus Hu/Texas/TCH04-577/2004/US and tested only with cells overexpressing Norovirus Capsid protein VP1.
Concentration	0.546 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Norovirus

Dilution info	1/1000
Notes	-

Predicted

Species	Norovirus
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line - Norovirus, Recombinant fragment - Norovirus
Dilution info	-
Notes	-

IHC-P

Tested

Species	Transfected cell line - Norovirus
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Norovirus
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Norovirus, Recombinant fragment - Norovirus
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line - Norovirus
Dilution info	1/5000
Notes	-

Predicted

Species	Norovirus
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Norovirus, Recombinant fragment - Norovirus
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Recombinant fragment - Norovirus
Dilution info	1000 ng/mL
Notes	Use at 62.5 ng/ml

Predicted

Species	Norovirus
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Norovirus, Transfected cell line - Norovirus

Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Norovirus, Transfected cell lysate - Norovirus, Transfected cell line - Norovirus, Recombinant fragment - Norovirus
Dilution info	-
Notes	-

IP

Not recommended

Species	Norovirus, Transfected cell lysate - Norovirus, Transfected cell line - Norovirus, Recombinant fragment - Norovirus
Dilution info	-
Notes	-

Target data

See full target information Norovirus Capsid protein VP1

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 Norovirus Capsid protein VP1 also known as the Norwalk Capsid protein is a major structural component of noroviruses. The mass of this protein is approximately 58 kilodaltons. It is expressed within the viral particles forming the outer shell or capsid which plays an important role in protection and infectivity of the virus. VP1 is also the main target for capsid ELISA tests which are employed for virus detection.
Biological function summary	Norovirus Capsid protein VP1 assembles into icosahedral particles forming the structure that encases the viral RNA. It works as part of a complex with other molecular groups to facilitate the virus’s entry into host cells by binding to histo-blood group antigens found on epithelial cells of the digestive tract. This protein’s structure allows it to adapt and evade the host immune response which plays role in the virus's infectivity.
Pathways	Norovirus Capsid protein VP1 involves in pathways related to viral replication and immune evasion. Inside the host it participates in interactions that inhibit immune signaling pathways. These interactions often involve proteins like the Golgi-associated mechanics to promote efficient assembly and release of viral particles. VP1's interaction with cellular machinery ensures ongoing propagation of the virus.
Associated diseases and disorders	The Norovirus Capsid protein VP1 directly connects to gastroenteritis a leading cause of acute viral gastroenteritis. It links to disease progression by aiding viral invasion and persistence in the gastrointestinal tract. The VP1's interactions with the immune system and histo-blood group antigens contribute to high transmissibility and variability of infection severity among different individuals.

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

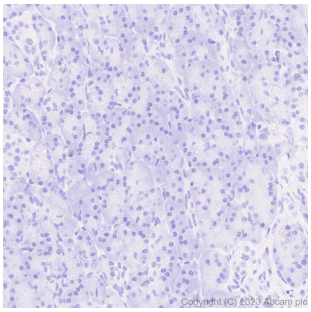
We do not recommend this combination. It is not covered by our product promise.

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.

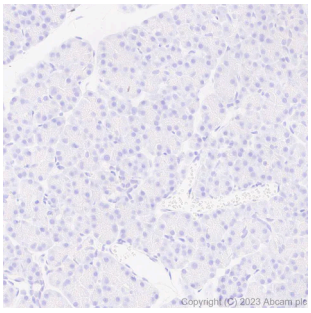
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



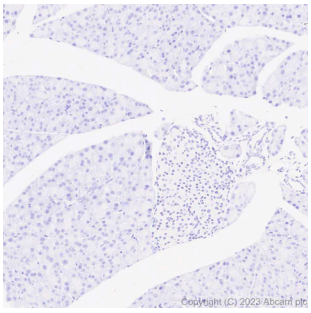
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling Norovirus Capsid protein VP1 with ab308068 at 1/5000 followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on human pancreas (PMID:19266182). The section was incubated with ab308068 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



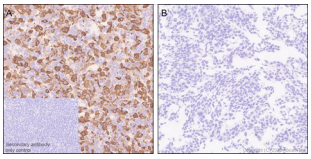
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Immunohistochemical analysis of paraffin-embedded rat pancreas tissue labeling Norovirus Capsid protein VP1 with ab308068 at 1/5000 followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on rat pancreas. The section was incubated with ab308068 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



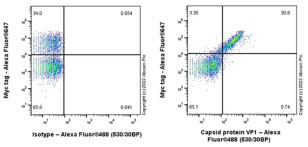
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue labeling Norovirus Capsid protein VP1 with ab308068 at 1/5000 followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on mouse pancreas. The section was incubated with ab308068 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



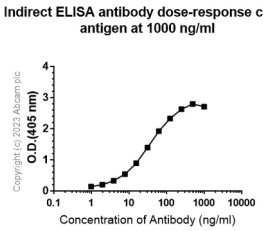
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Immunohistochemical analysis of paraffin-embedded cells labeling Norovirus Capsid protein VP1 with ab308068 at 1/5000 followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) HEK-293T (human embryonic kidney epithelial cell) transfected with a Capsid protein VP1 expression vector containing a his tag, no staining on (B) HEK-293T transfected with empty vector containing a his tag. The section was incubated with ab308068 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 Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



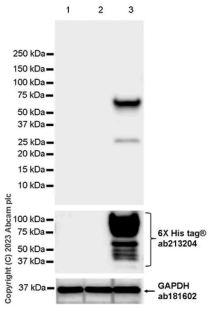
Flow Cytometry (Intracellular) - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HEK-293T cells (human embryonic kidney epithelial cells) transfected with Myc-tagged Capsid protein VP1 overexpression construct cells labelling Norovirus Capsid protein VP1 with ab308068 at 1/5000 dilution (Right) compared with a Rabbit monoclonal IgG isotype control (ab172730) (Left) A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Cells were stained with rabbit IgG or ab308068 and co-stained with anti-Myc tag conjugated to Alexa Fluor® 647.



Indirect ELISA - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Indirect ELISA analysis of ab308068 at 0-1000 ng/ml. The secondary antibody used was Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1/2500 dilution. Antigen: Capsid protein VP1



Western blot - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068)

Blocking and diluting buffer and concentration: 5% NFDM/TBST The band beneath the target band (62 kDa) is expected to be degradation products. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 3 seconds
All lanes:
Western blot - Anti-Norovirus Capsid protein VP1 antibody [EPR27186-20] (ab308068) at 1/1000 dilution

Lane 1:
293T whole cell lysate at 20 µg

Lane 2:
293T cells transfected with an empty vector containing a his tag whole cell lysate at 20 µg

Lane 3:
293T cells transfected with a Capsid protein VP1 expression vector containing a his tag 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: 62 kDa

Exposure time: 3s

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