abcam

ab300103

Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free)

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR22321-99
Purification technique	Affinity purification Protein A
Concentration	1.034 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Rat, Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Rat, Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Rat, Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Rat, Mouse, Human, Recombinant full length protein - Human
Dilution info	-
Notes	-

Dot

Tested

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Rat, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Rat, Mouse, Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information ULBP3

Function	Binds and activates the KLRK1/NKG2D receptor, mediating natural killer cell cytotoxicity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

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.

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.

Supplementary info

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

Activity summary	ULBP3 also known as UL16 binding protein 3 plays a significant role in immune surveillance. The protein is a member of the NKG2D ligand family and has a mass of approximately 30 kDa. ULBP3 is expressed on the cell surface of many human tissues predominantly in stressed transformed or infected cells where it becomes more prominent. The expression of ULBP3 signals to immune cells especially natural killer (NK) cells and some subsets of T-cells acting as an essential point of recognition and interaction.
Biological function summary	ULBP3 interacts with the activating receptor NKG2D to initiate immune responses against tumor cells or pathogen-infected cells. The binding of ULBP3 to NKG2D forms a part of the recognition process leading to the activation of NK cells and cytotoxic T cells enhancing their ability to destroy target cells. ULBP3 operates independently and not as part of a larger ligand complex making its interactions directly important for regulating immune function across different environments and conditions aiding in the maintenance of cellular homeostasis.
Pathways	ULBP3 participates integrally in immune signaling pathways like the NKG2D receptor-mediated pathway. Within this pathway its role in signaling enhances NK cell cytotoxicity and cytokine production. ULBP3 is related to other NKG2D ligands like MICA MICB and other ULBP molecules through this immune recognition pathway collectively contributing to immune defense mechanisms. These pathways form a critical element of the broader immune surveillance mechanism in the human body.
Associated diseases and disorders	ULBP3 has associations with various cancers and infectious diseases. Overexpression of ULBP3 has been observed in certain types of cancers such as lymphoma where it promotes recognition by the NK cells. Another area of interest is its role in viral infections where pathogens may modulate ULBP3 expression to evade the immune system. ULBP3's interaction with proteins like NKG2D is vital in modulating immune responses during these diseases highlighting its potential both as a target for therapeutic intervention and a biomarker for disease progression.

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

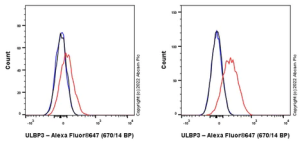
We do not recommend this combination. It is not covered by our product promise.

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.

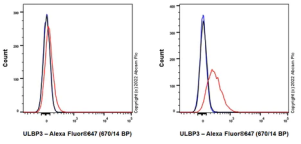
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



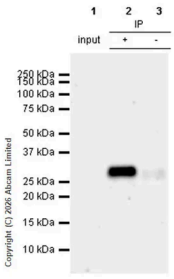
Flow Cytometry (Intracellular) - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

Flow cytometric analysis of Raji (human burkitt's lymphoma b lymphocyte, Left) / NAMALWA (human burkitt's lymphoma b lymphocyte, Right) cells labelling ULBP3 with ab300102 at 1/500 dilution (0.1ug) (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® 647, ab150083) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.Low expression: Raji(PMID: 12414645, 11827464).



Flow Cytometry (Intracellular) - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

Flow cytometric analysis of MCF7 (human breast adenocarcinoma epithelial cell, Left) / HeLa (human cervix adenocarcinoma epithelial cell, Right) cells labelling ULBP3 with ab300102 at 1/500 dilution (0.1ug) (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® 647, ab150083) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.Low expression: MCF7(PMID: 25217158).



Immunoprecipitation - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

This data was developed using ab300102, the same antibody clone in a different buffer formulation.

ULBP3 was immunoprecipitated from 0.35 mg SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate 10 ug with ab300102 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300102 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.

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

All lanes:
Immunoprecipitation - Anti-ULBP3 antibody [EPR22321-99] (ab300102) at 1/30 dilution

Lane 1:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 2:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate

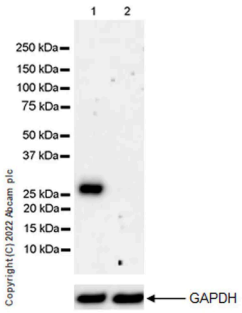
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab300102 in SW480 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 27 kDa

Exposure time: 93s



Western blot - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

This data was developed using ab300102, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-ULBP3 antibody [EPR22321-99] (ab300102) at 1/1000 dilution

Lane 1:
NAMALWA (human burkitts lymphoma b lymphocyte) whole cell lysate

Lane 2:
Raji (human burkitts lymphoma b lymphocyte) whole cell lysate

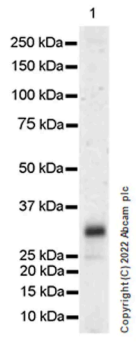
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Performed under reducing conditions.

Observed band size: 30 kDa

Exposure time: 3min



Western blot - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

This data was developed using ab300102, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-ULBP3 antibody [EPR22321-99] (ab300102) at 1/1000 dilution

All lanes:
Human testis tissue lysate

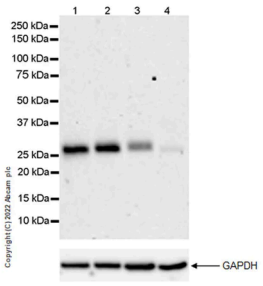
Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Performed under reducing conditions.

Observed band size: 30 kDa

Exposure time: 3min



Western blot - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

This data was developed using ab300102, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-ULBP3 antibody [EPR22321-99] (ab300102) at 1/1000 dilution

Lane 1:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate

Lane 2:
MDA-MB-231 (human breast adenocarcinoma epithelial cell) whole cell lysate

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

Lane 4:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate

Lane 9:
PANC-1 (human pancreatic epithelioid carcinoma epithelial cell), whole cell lysate

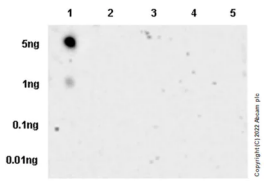
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Performed under reducing conditions.

Observed band size: 30 kDa

Exposure time: 3min



Dot Blot - Anti-ULBP3 antibody [EPR22321-99] (BSA and Azide free) (ab300103)

This data was developed using ab300102, the same antibody clone in a different buffer formulation.
Dot blot analysis of ULBP3 using ab300102 at 1:1000 followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100,000 dilution.

Lane 1: Human ULBP3 recombinant protein

Lane 2: Human ULBP1 recombinant protein

Lane 3: Human ULBP2 recombinant protein

Lane 4: Human ULBP5 recombinant protein

Lane 5: Human ULBP6 recombinant protein

Exposure time: 3 minutes

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

No cross-reactivity with other family members.

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