abcam

ab272014

Anti-TROP2 antibody [SP293] - 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	SP293
Purification technique	Affinity purification Protein A/G
Concentration	1.049 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

WB

Tested

Species	Human, Mouse
Dilution info	-

Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Boil tissue section in EDTA buffer pH 8.0 for 10 minutes followed by cooling at room temperature for 20 minutes. Incubate with primary antibody for 10 minutes at room temperature. ;

Species	Mouse
Dilution info	-
Notes	Boil tissue section in EDTA buffer pH 8.0 for 10 minutes followed by cooling at room temperature for 20 minutes. Incubate with primary antibody for 10 minutes at room temperature. ;

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information TACSTD2

Function	May function as a growth factor receptor.

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

ab272014 is the carrier-free version of ab227689.

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	TROP2 also known as TACSTD2 or tumor-associated calcium signal transducer 2 is a single-pass type I membrane glycoprotein. This protein is about 35 kDa in mass and primarily expresses in epithelial tissues. It acts as a transmembrane receptor that plays a role in signal transduction due to its domain structure binding and

	activation processes on the cell surface. TROP2 exhibits high expression in several types of tumors making it a potential target for therapeutic antibodies like anti-TROP2 anti trop2 or anti-TROP-2.
Biological function summary	TROP2 mediates calcium signaling and cell proliferation. It functions by being a part of a signaling complex on the cell membrane which affects multiple cellular activities such as cell growth motility and survival. Its role in maintaining the integrity of the epithelial cell layer also shows TROP2's significance in normal tissue homeostasis. The interaction of TROP2 with the extracellular matrix and other cell surface proteins support the structural integrity and communication between cells.
Pathways	TROP2 plays a central role in the PI3K/AKT and MAPK signaling pathways that regulate cell growth and survival. Within these pathways TROP2 works in concert with proteins like ERK and AKT important for transmitting extracellular signals into appropriate cellular responses. These pathways are key regulators of many physiological processes including cell cycle progression and apoptosis prevention.
Associated diseases and disorders	TROP2 is strongly associated with several types of cancers particularly epithelial cancers like breast and pancreatic cancer. Overexpression of TROP2 in tumors often correlates with poor prognosis and aggressive disease phenotypes. Interaction between TROP2 and proteins like EGFR in cancer cell signaling pathways amplifies tumor progression and metastasis. Understanding these associations makes TROP2 a significant target in developing therapeutic strategies for cancer treatment.

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

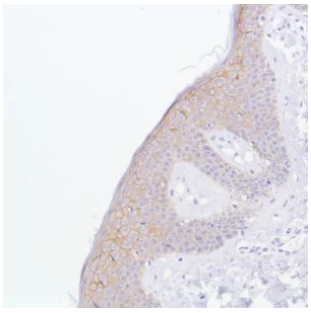
We do not recommend this combination. It is not covered by our product promise.

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.

14 product images

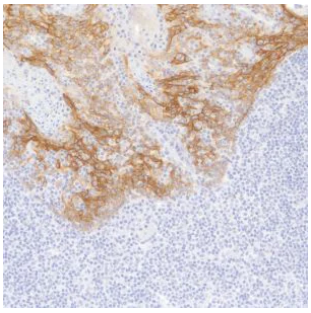


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human skin tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

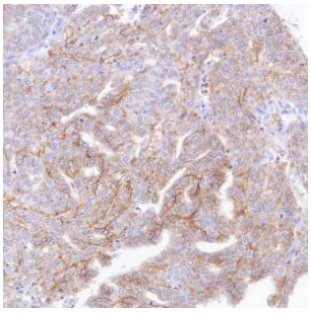


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human tonsil tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

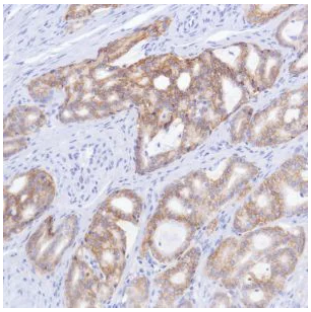


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human ovarian adenocarcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

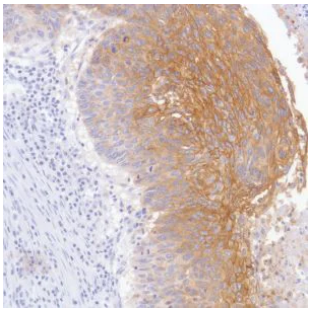


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human prostate adenocarcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

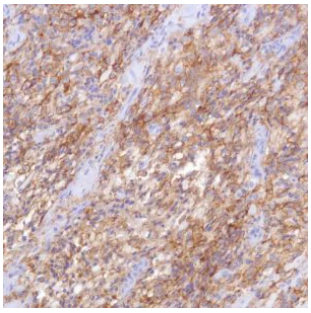


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human lung squamous cell carcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

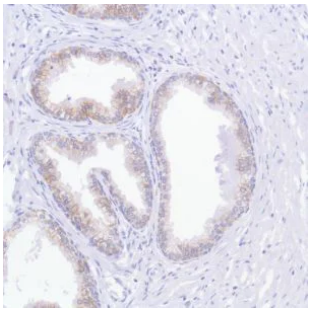


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human prostate adenocarcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

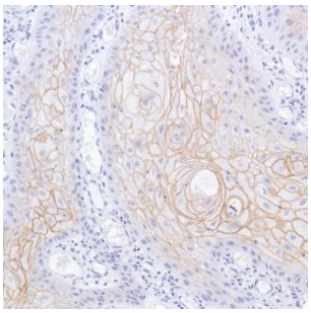


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human prostate tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

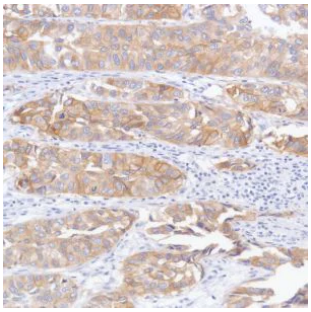


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human skin squamous cell carcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

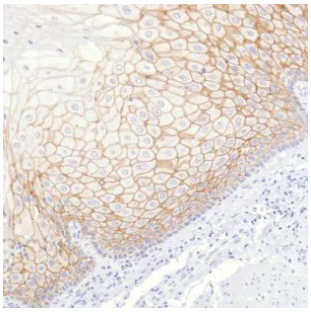


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human bladder transitional cell carcinoma tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

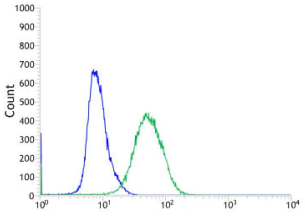


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

Formalin-fixed, paraffin-embedded human esophagus tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

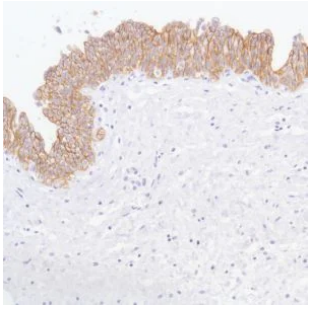
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).



Flow Cytometry (Intracellular) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Flow Cytometry (Intracellular) staining using rabbit Anti-TROP2 antibody

Intracellular Flow Cytometry analysis of SK-BR-3 (human mammary gland adenocarcinoma cell line) cells, labeling TROP2 with ab227689 at 1/100 dilution (green) compared to a Rabbit IgG negative control (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

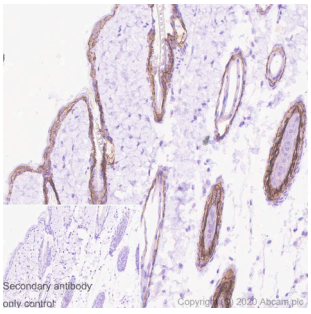


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

TROP2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TROP2 antibody

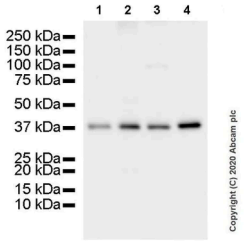
Formalin-fixed, paraffin-embedded human bladder tissue stained for TROP2 using ab227689 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse skin tissue labelling TROP2 with ab227689 at 1/50 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9 for 20 minutes. The section was incubated with ab227689 for 10 mins at room temperature. The Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used. Membranous staining on the mouse skin. Performed on a Leica Biosystems BOND® RX instrument. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).



Western blot - Anti-TROP2 antibody [SP293] - BSA and Azide free (ab272014)

Blocking/Diluting buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab227689).

All lanes:
Western blot - Anti-TROP2 antibody [SP293] - C-terminal (ab227689) at 1/100 dilution

Lane 1:
bEnd.3 (mouse brain endothelioma) whole cell lysate at 20 µg

Lane 2:
4T1 (mouse mammary gland carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
LLC1 (mouse lung carcinoma) whole cell lysate at 20 µg

Lane 4:
B16F10 (Mouse skin melanoma) 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: 36 kDa

Observed band size: 37 kDa

Exposure time: 10s

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