abcam

ab289557

Anti-TIGIT antibody [4D4] (BSA and Azide free)

Recombinant

Key facts

Isotype	IgG2a
Host species	Armenian hamster
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	4D4
Purification technique	Affinity purification Protein A
Concentration	1.042 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

I-ELISA

Tested

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

Expected

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

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

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

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

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

Target data

See full target information Tigit

Function	Inhibitory receptor that plays a role in the modulation of immune responses. Suppresses T-cell activation by promoting the generation of mature immunoregulatory dendritic cells. Upon binding to its ligands PVR/CD155 or NECTIN2/CD112, which are expressed on antigen-presenting cells, sends inhibitory signals to the T-cell or NK cell. Mechanistically, interaction with ligand leads to phosphorylation of the cytoplasmic tail by Src family tyrosine kinases such as FYN or LCK, allowing subsequent binding to adapter GRB2 and SHIP1/INPP5D. In turn, inhibits PI3K and MAPK signaling cascades. In addition, associates with beta-arrestin-2/ARRB2 to recruit SHIP1/INPP5D that suppresses autoubiquitination of TRAF6 and subsequently inhibits NF-kappa-B signaling pathway. Also acts as a receptor for NECTIN4 to inhibit NK cell cytotoxicity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab289557 is a carrier free version of ab289547.

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.

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.

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.

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.

Supplementary info

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

Activity summary	TIGIT also known as T cell immunoreceptor with Ig and ITIM domains is an immunoglobulin superfamily receptor. It weighs approximately 26 kDa. TIGIT commonly expresses on T cells especially on regulatory T cells (Tregs) and effector memory T cells. It also presents on natural killer (NK) cells. Among its alternate forms some notable ones also include the anti-TIGIT and biotinylated TIGIT antibodies used in experimental research to monitor immune responses.
Biological function summary	TIGIT acts as an inhibitory receptor modulating immune responses. It belongs to the CD28 family and binds to poliovirus receptor (PVR) and nectin-2 on antigen-presenting cells. This interaction inhibits T cell activation and proliferation and increases Treg cell activity maintaining immune homeostasis. TIGIT forms a complex with other inhibitory receptors like PD-1 2B4 and CD96 to further regulate immune functions.
Pathways	The interaction of TIGIT with its ligands significantly affects the immune checkpoint pathway. This involvement regulates T cell and NK cell activity. TIGIT is related to CD226 (DNAM-1) which competes for binding to its ligands influencing cellular signaling pathways. Through these pathways TIGIT signals through the downstream SHP-1 and SHP-2 proteins affecting immune cell signaling and response.
Associated diseases and disorders	TIGIT has implications in cancer and autoimmune diseases. Its inhibitory function can allow tumor progression by dampening effective anti-tumor immunity. In cancer TIGIT's activity often pairs with PD-1 both contributing to immune checkpoint blockade resistance necessary for tumor evasion. In autoimmune diseases increased TIGIT expression could result in reduced immune cell attack against self tissues showing its potential to modulate treatment strategies.

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.

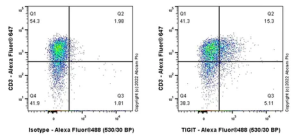
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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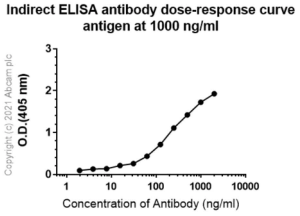
2 product images



Flow Cytometry (Intracellular) - Anti-TIGIT antibody [4D4] (BSA and Azide free) (ab289557)

TIGIT Flow Cytometry (Intracellular) staining of Mouse splenocytes treated with 2.5 µg/ml Concanavalin A (ConA) using armenian hamster Anti-TIGIT antibody

Flow cytometric analysis of mouse splenocytes treated with 2.5 µg/ml Concanavalin A (ConA) for 72h labelling TIGIT with ab289547 at 1/1000 dilution (Right) compared with a American Hamster monoclonal IgG isotype control (Left). A Goat anti American Hamster IgG at 1/500 dilution was used as the secondary antibody.



Indirect ELISA - Anti-TIGIT antibody [4D4] (BSA and Azide free) (ab289557)

Indirect ELISA antibody dose-response curve using ab289547 between 0-2000 ng/mL. Antigen concentration of 1000 ng/mL. An alkaline phosphatase-conjugated goat anti-American Hamster IgG (H+L) at 1/1000 dilution was used as the secondary antibody.

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