abcam

ab319147

Anti-ST2 antibody [EPR28307-60] - 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	EPR28307-60
Purification technique	Affinity purification Protein A
Concentration	1.007 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Il1rl1

Function	Receptor for interleukin-33 (IL-33) which plays crucial roles in innate and adaptive immunity, contributing to tissue homeostasis and responses to environmental stresses together with coreceptor IL1RAP (PubMed:17675517, PubMed:18450470, PubMed:22660580, PubMed:29045903). Its stimulation recruits MYD88, IRAK1, IRAK4, and TRAF6, followed by phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8 (By similarity). Possibly involved in helper T-cell function (By similarity). Upon tissue injury, induces UCP2-dependent mitochondrial rewiring that attenuates the generation of reactive oxygen species and preserves the integrity of Krebs cycle required for persistent production of itaconate and subsequent GATA3-dependent differentiation of inflammation-resolving alternatively activated macrophages (PubMed:34644537). Isoform B. Inhibits IL-33 signaling.

Storage

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

Notes

ab319147 is the carrier-free version of ab319146.

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	ST2 also known as IL-1RL1 or IL-1RL1 chimera protein is a member of the IL-1 receptor family. It has a molecular mass of approximately 55 kDa. This protein exists in different forms including a membrane-bound form and a soluble variant. Researchers typically find ST2 expressed in various tissues including the lungs gut and cardiovascular system. The expression level can vary significantly depending on the physiological or pathological state.

Biological function summary	ST2 interacts with interleukin-33 (IL-33) and functions as its receptor. The binding of IL-33 to ST2 activates immune responses particularly influencing T-helper 2 (Th2) cells. ST2 forms part of a receptor complex including IL-1 receptor accessory protein IL-1RAcP necessary for signal transduction. This interaction leads to the activation of nuclear factor kappa-light-chain-enhancer of activated B cells (NF-kB) and mitogen-activated protein kinase (MAPK) signaling pathways facilitating inflammatory responses.
Pathways	IL-33 signals through the ST2 receptor participating actively in the immune signaling pathway. This pathway plays a significant role in modulating inflammatory and immune responses. ST2 association with NF-kB broadly affects inflammatory signaling while its involvement with the MAPK pathway aids in cellular responses to cytokines and stress. The close relationship with the IL-33/ST2 axis highlights its importance in maintaining immune homeostasis and reacting to environmental stressors.
Associated diseases and disorders	ST2 has significant associations with asthma and cardiovascular diseases. In asthma the IL-33/ST2 axis critically contributes to airway inflammation and hyperresponsiveness. Similarly in the context of cardiovascular diseases elevated levels of soluble ST2 are markers of heart failure with the ST2/IL-33 axis contributing to cardiac remodeling. ST2's connection with inflammatory processes implies it also interacts with other cytokines such as interleukin-6 (IL-6) exacerbating the disease states through shared pathways.

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

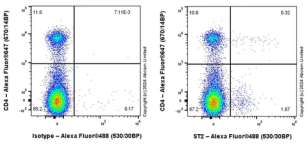
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images



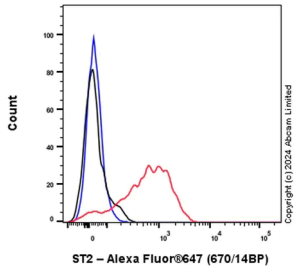
Flow Cytometry - Anti-ST2 antibody [EPR28307-60] - BSA and Azide free (ab319147)

This data was developed using ab319146, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Mouse spleen cell cells labelling ST2 with ab319146 at 1/500 dilution (0.1ug) / right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells were co-stained with anti mouse CD4 conjugated to Alexa Fluor®647 .
Gated on viable cells.



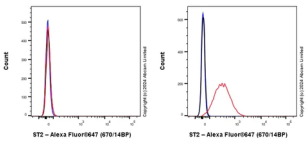
Flow Cytometry - Anti-ST2 antibody [EPR28307-60] - BSA and Azide free (ab319147)

This data was developed using ab319146, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of P815 (mouse mastocytoma mast cell) cells labelling ST2 with ab319146 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 1/5000 dilution was used as the secondary antibody.

Gated on viable cells.



Flow Cytometry - Anti-ST2 antibody [EPR28307-60] - BSA and Azide free (ab319147)

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Flow cytometric analysis of NIH/3T3 (mouse embryonic fibroblast) (Right) / HL-1 (mouse atrial muscle cell) (Left) cells labelling ST2 with ab319146 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 1/5000 dilution was used as the secondary antibody.

Gated on viable cells.
Low expression: HL-1.

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