abcam

ab288543

# Anti-ST2 antibody [B-L42] - BSA and Azide free

## Key facts

| | |
|---|---|
| **Isotype** | IgG2b |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.3 - 7.5 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Recombinant Fragment Protein within Human IL1RL1 aa 1-350. The exact immunogen used to generate this antibody is proprietary information. Database link Q01638 |
| **Carrier free** | Yes |
| **Clone number** | B-L42 |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | Recognises both natural membrane form and recombinant human ST2. |
| **Light chain type** | kappa |
| **Purification notes** | Purified from cell culture supernatant |

## Reactivity data

## Flow Cyt

**Tested**

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **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:35238669). Its stimulation recruits MYD88, IRAK1, IRAK4, and TRAF6, followed by phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8. Possibly involved in helper T-cell function (Probable) (PubMed:16286016). 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 (By similarity). 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

Hybridoma: Myeloma X63/AG.8653 x Balb/c node cells.

## 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**

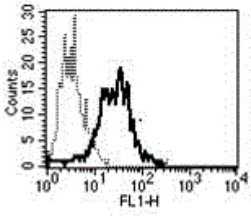
We do not recommend this combination. It is not covered by our product promise.

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.

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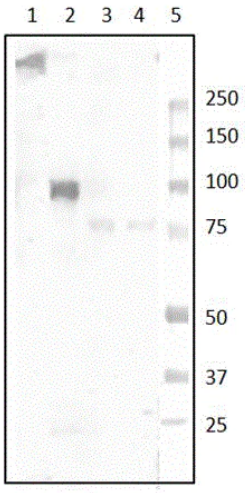
## 2 product images




### Flow Cytometry - Anti-ST2 antibody [B-L42] - BSA and Azide free (ab288543)

ST2 Flow Cytometry staining using mouse Anti-ST2 antibody

Flow cytometry overlay histogram of LPS-activated human monocytes labelling ST2 with ab288543 at 1/2 – 1/256 dilution (black) compared with a resting monocyte isotype control (grey). GAM-FITC at 1/800 dilution was used as the secondary antibody.




### Western blot - Anti-ST2 antibody [B-L42] - BSA and Azide free (ab288543)

ST2 Western blot staining using mouse Anti-ST2 antibody

ST2 is described with 8 glycosylation sites which could increase the size of protein (Identification of human ST2 protein in the sera of patients with autoimmune diseases, Tominaga and col.)
Lanes 1 - 4:
Western blot - Anti-ST2 antibody [B-L42] - BSA and Azide free (ab288543) at 2 µg/mL

Lane 5:
Western blot - Anti-ST2 antibody [B-L42] - BSA and Azide free (ab288543)

Lane 1:
rh ST2 (non-reduced form)

Lane 2:
rh ST2 (reduced form)

Lane 3:
Cell lysate of HT29 (non-reduced form)

Lane 4:
Cell lysate of HT29 (reduced form)

Lane 5:
Molecular weight marker

Secondary

All lanes:
anti-IgG2b HRP at 1/20000 dilution

Predicted band size: 63 kDa

Observed band size: 75 kDa

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