Mouse ST2/IL-33R Alexa Fluor® 532-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 245714

Catalog Number: FAB1004X

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse ST2/IL-33 R in direct ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant human ST2 and no cross-reactivity with recombinant mouse (rm) IL-1 R1 or rmIL-1 R2 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 245714
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	S. frugiperda insect ovarian cell line Sf 21-derived recombinant mouse ST2/IL-33 R Ser27-Arg332 Accession # P14719
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

ST2, also known as IL-33R, IL-1 R4 and T1, is an Interleukin-1 receptor family glycoprotein that contributes to Th2 immune responses (1, 2). Mouse ST2 consists of a 306 amino acid (aa) extracellular domain (ECD) with three Ig-like domains, a 23 aa transmembrane segment, and a 212 aa cytoplasmic domain with an intracellular TIR domain (3). Alternate splicing of the 120 kDa mouse ST2 generates a soluble 60 kDa isoform that lacks the transmembrane and cytoplasmic regions (3). Within the ECD, mouse ST2 shares 68% and 81% aa sequence identity with human and rat ST2, respectively. ST2 is expressed on the surface of mast cells, activated Th2 cells, macrophages, and cardiac myocytes (4-7). It binds IL-33, a cytokine that is up-regulated by inflammation or mechanical strain in smooth muscle cells, airway epithelia, keratinocytes, and cardiac fibroblasts (4, 8). IL-33 binding induces the association of ST2 with IL-1R AcP, a shared signaling subunit that also associates with IL-1 RI and IL-1 R rp2 (1, 9, 10). In macrophages, ST2 interferes with signaling from IL-1 RI and TLR4 by sequestering the adaptor proteins MyD88 and Mal (6). In addition to its role in promoting mast cell and Th2 dependent inflammation, ST2 activation enhances antigen induced hypernociception and protects from atherosclerosis and cardiac hypertrophy (4, 11-13). The soluble ST2 isoform is released by activated Th2 cells and strained cardiac myocytes and is elevated in the serum in allergic asthma (5, 7, 14). Soluble ST2 functions as a decoy receptor that blocks IL-33's ability to signal through transmembrane ST2 (9, 12-14).

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