

DESCRIPTION

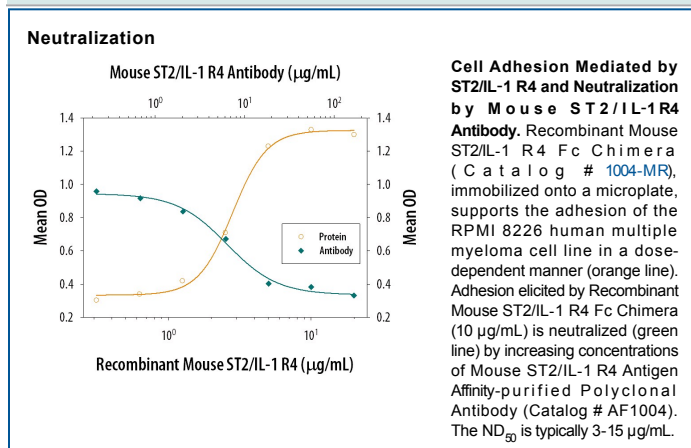
Species Reactivity	Mouse
Specificity	Detects mouse ST2/IL-1R4 in direct ELISAs and Western blots. In these formats, approximately 40% cross-reactivity with recombinant human ST2/IL-1R4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant mouse ST2/IL-1R4 Ser27-Arg332 Accession # P14719
Endotoxin Level	<0.1 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse ST2/IL-1 R4 Fc Chimera (Catalog # 1004-MR)
Neutralization	Measured by its ability to neutralize ST2/IL-1 R4-mediated adhesion of the RPMI 8226 human multiple myeloma cell line [Yanagisawa, K. (1997) J. Biochem. 121 :95]. The Neutralization Dose (ND ₅₀) is typically 3-15 µg/mL in the presence of 10 µg/mL Recombinant Mouse ST2/IL-1 R4 Fc Chimera.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month from date of receipt, 2 to 8 °C, reconstituted. 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

ST2, also known as 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. Alternate splicing of the 120 kDa mouse ST2 generates a soluble 60 kDa isoform that lacks the transmembrane and cytoplasmic regions. 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. It binds IL-33, a cytokine that is upregulated by inflammation or mechanical strain in smooth muscle cells, airway epithelia, keratinocytes, and cardiac fibroblasts. 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 Rrp2. In macrophages, ST2 interferes with signaling from IL-1 RI and TLR4 by sequestering the adaptor proteins MyD88 and Mal. 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. The soluble ST2 isoform is released by activated Th2 cells and strained cardiac myocytes and is elevated in the serum in allergic asthma. Soluble ST2 functions as a decoy receptor that blocks IL-33's ability to signal through transmembrane ST2.