ST2/IL1RL1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72459
Synonyms:	Interleukin-1 receptor-like 1; Interleukin-33 receptor alpha chain; Il1rl1; Ly84; St2; Ste2
Species:	Mouse
Source:	HEK293
Accession:	P14719-2 (S27-A337)
Gene ID:	17082
Molecular Weight:	50-70 kDa

PROPERTIES

AA Sequence	S K S S W G L E N E A L I V R C P Q R G R S T Y P V E W Y Y S D T N E S I P T Q K R N R I F V S R D R L K F L P A R V E D S G I Y A C V I R S P N L N K T G Y L N V T I H K K P P S C N I P D Y L M Y S T V R G S D K N F K I T C P T I D L Y N W T A P V Q W F K N C K A L Q E P R F R A H R S Y L F I D N V T H D D E G D Y T C Q F T H A E N G T N Y I V T A T R S F T V E E K G F S M F P V I T N P P Y N H T M E V E I G K P A S I A C S A C F G K G S H F L A D V L W Q I N K T V V G N F G E A R I Q E E E G R N E S S S N D M D C L T S V L R I T G V T E K D L S L E Y D C L A L N L H G M I R H T I R L R R K Q P S K E C P S H I A
Biological Activity	Measured in a cell proliferation assay using A549 cells. The ED_{50} for this effect is 34.04 ng/mL in the presence of 20 ng/mL recombinant mouse IL-33, corresponding to a specific activity is 2.51×10^5 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ST2/IL1RL1 serves as a receptor for interleukin-33 (IL-33), playing crucial roles in innate and adaptive immunity to maintain

tissue homeostasis and respond to environmental stresses, in conjunction with its coreceptor IL1RAP. Upon stimulation, it recruits MYD88, IRAK1, IRAK4, and TRAF6, leading to the phosphorylation of various MAPKs, including MAPK3/ERK1, MAPK1/ERK2, MAPK14, and MAPK8. This receptor is implicated in helper T-cell function and, in the context of tissue injury, induces a UCP2-dependent mitochondrial rewiring. This rewiring attenuates the generation of reactive oxygen species, preserving the integrity of the Krebs cycle. This preservation is essential for sustained production of itaconate and subsequent GATA3-dependent differentiation of inflammation-resolving alternatively activated macrophages. Additionally, ST2/IL1RL1 plays a role in inhibiting IL-33 signaling.

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