### Human IL1RAP ECD (Extracellular Domain), Fc-fusion, Recombinant

**Background:**
IL1RAP (interleukin-1 receptor accessory protein), also known as IL1R3 (interleukin-1 receptor 3), is a single-pass, type I transmembrane glycoprotein that belongs to the interleukin-1 receptor (IL1R) family. Like other family members, IL1RAP contains 3 immunoglobulin (Ig)-like domains in the extracellular region and an intracellular TIR (Toll-like receptor/IL-1 receptor) signaling domain that is also conserved in the Toll-like receptor family. IL1RAP is identified as a co-receptor for a high-affinity IL-1 receptor type I (IL1R1) complex that mediates IL1-dependent activation of NF-κB, MAPK and other signaling pathways. IL1RAP is required for transducing the signaling events on the plasma membrane level to downstream activation of IL1-responsive genes. IL1 are pleiotropic cytokines that induce synthesis of acute phase and proinflammatory proteins during infection, tissue damage, or stress. Alternative splicing of the IL1RAP gene results in 2 transcript variants encoding two different isoforms, one membrane-bound and one soluble. The ratio of soluble to membrane-bound forms increases during acute-phase induction or stress. The soluble form of IL1RAP contributes to the antagonism of IL-1 action. When present with soluble IL1R2, soluble IL1RAP increases the IL-1 binding affinity y of IL1R2 more than 100-fold. In addition, ILRAP interacts with ST2 on mast cells and Th2 T lymphocytes to create a functional receptor complex for transducing IL33-dependent signaling activity.

**References:**

**Construct Detail:** The recombinant human IL1RAP ECD is expressed as a 58S amino acid protein consisting of Ser21-Thr367 region of IL1RAP (UniProt accession #Q9NPH3) and a C-terminal Fc from human IgG1, which exists as a dimer under non-reducing conditions.

**Gene Symbol:** IL1RAP  
**Gene Synonym:** IL-1RAP; IL1R3; IL-1R-3; C3orf13; IL-1RAcP

**Full Name:** interleukin-1 receptor accessory protein interleukin-1 receptor 3; interleukin-1 receptor accessory protein beta

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