

## IL-1 R9 Protein, Human, Recombinant (hFc)

## General Information

Synonyms:	IL-1R9;interleukin 1 receptor accessory protein-like 2;IL1RAPL-2;IL1R9;TIGIRR-1
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Glu 356) of human IL1R9 (NP_059112.1) precursor was expressed with the fused Fc region of human IgG1 at the C-terminus. Predicted N terminal: Thr 17
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NP60
Molecular Weight:	66 kDa (predicted); 80-85 kDa (reducing condition, due to glycosylation)

## QC Testing

Biological Activity:	Measured by its ability to bind biotinylated human IL1 $\alpha$ in functional ELISA.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

## Preparation and Storage

## Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

## Stability &amp; Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

## Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

X-linked interleukin-1 receptor accessory protein-like 2 (IL1RAPL2) or Interleukin-1 receptor 9 (IL-1R9) is a member of the interleukin 1 receptor family. This protein is similar to the interleukin 1 accessory proteins. IL-1R9/IL1RAPL2 shows restricted expression in the fetal brain and is highly homologous to IL1RAPL, which is reportedly involved in nonsyndromic X-linked mental retardation. IL-1R9/IL1RAPL2 is highly homologous to IL-1R8. Both forms have no

known ligands and receptors are found in the fetal brain. IL-1R9/IL1RAPL2 may function as a negative receptor. Both IL1RAPL1 and IL1RAPL2 have novel C-terminal sequences not present in other related proteins. IL-1R9/IL1RAPL2 may be strong candidates for X-linked non-syndromic mental retardation loci, and that molecules resembling IL-1 and IL-18 play a role in the development or function of the central nervous system.

### Reference

Jin H, et al. (2000) Two novel members of the interleukin-1 receptor gene family, one deleted in Xp22.1-Xp21.3 mental retardation. *Eur J Hum Genet.* 8(2): 87-94.

Sana TR, et al. (2000) Computational identification, cloning, and characterization of IL-1R9, a novel interleukin-1 receptor-like gene encoded over an unusually large interval of human chromosome Xq22.2-q22.3. *Genomics.* 69 (2): 252-62.

Gambino F, et al. (2007) IL1-receptor accessory protein-like 1 (IL1RAPL1), a protein involved in cognitive functions, regulates N-type Ca<sup>2+</sup>-channel and neurite elongation. *Proc Natl Acad Sci.* 104(21): 9063-8.

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