

IL-1RAPL1 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	IL1R8;MRX21;interleukin 1 receptor accessory protein-like 1;MRX34;TIGIRR-2;OPHN4;IL1RAPL;MRX10
Protein Construction:	A DNA sequence encoding the human IL1R8 (NP_055086.1) extracellular domain (Met 1-Leu 354) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NZN1
Molecular Weight:	65 kDa (predicted); 80-85 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to bind biotinylated human IL1 α in functional ELISA.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. 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 & 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

Interleukin-1 receptor accessory protein-like 1 (IL1RAPL1) is a member of the interleukin-1 receptor family. The protein structurally comprises three extracellular immunoglobulin domains, which presumably mediate binding of an as yet unidentified ligand, a transmembrane region, and an intracellular domain, which is likely to enable signaling via the NF κ B pathway. The means of signaling is almost certain to be identical to that used by the IL1R

family and the more distally related Toll protein. L1RAPL1 protein physically interacts via its 150 aa C-terminal domain with neuronal calcium sensor-1 (NCS-1), a protein widely expressed in neurons and the related chromaffin and PC12 cells. IL1RAPL1 is an integral membrane protein responsible for a nonsyndromic form of mental retardation (MR). It is suggested to affect the human cognitive ability to some extent, especially the memory and concentration capability.

Reference

Frdric Gambino, et al. (2007) IL1-receptor accessory protein-like 1 (IL1RAPL1), a protein involved in cognitive functions, regulates N-type Ca²⁺-channel and neurite elongation. *Proc Natl Acad Sci.* 104 (21): 9063-8.
Wheway JM, et al. (2003) A complex deletion-inversion-deletion event results in a chimeric IL1RAPL1-dystrophin transcript and a contiguous gene deletion syndrome. *J Med Genet.* 40: 127-131.

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