

## Recombinant Human Interleukin-36 Receptor Antagonist Protein (Human IL-36RA)

### Product Information

Product Name	Cat#	Size
	90130ES08	5 µg
Recombinant Human Interleukin-36 Receptor Antagonist Protein(Human IL-36RA)	90130ES60	100 µg
	90130ES76	500 µg

### Product Description

Human interleukin-36 receptor antagonist IL-36Ra; previously IL-1F5 and also named FIL-1δ (delta), IL-1HY1, IL-1H3, and IL-1L1 is a member of the IL-1 family of proteins. IL-1 family members include IL-1 beta, IL-1 alpha, IL-1ra, IL-18 and IL-1F5-F10. All family members show a 12 beta -strand, beta -trefoil configuration, and all family members are believed to have arisen from a common ancestral gene that underwent multiple duplications . The human IL- 36Ra/IL- 1F5 gene is in closest proximity to the gene for IL-1ra and is likely a relatively recent duplication of the IL-1ra gene. IL-36Ra/IL-1F5 is synthesized as a 155 amino acid (aa) protein that contains no signal sequence, no prosegment and no potential N-linked glycosylation site(s). Nevertheless, it appears to be secreted as a 17 kDa monomer. There is an alternate start site that potentially gives rise to an alternate splice form. The translated product, however, has a premature stop codon, resulting in a truncated 16 aa peptide. Human to mouse, full length IL-1F5 has 90% aa identity. Within the family, IL-36Ra/IL-1F5 is 50% aa identical to IL-1ra, and 32%, 31%, 35%, 37%, 32% and 42% aa identical to IL-1 beta, IL-36 alpha /IL- 1F6, IL- 37/IL- 1F7, IL- 36 beta /IL- 1F8, IL- 36 gamma /IL- 1F9 and IL- 1F10, respectively. Cells reported to expressIL- 36Ra/IL- 1F5 include monocytes, B cells, dendritic cells/Langerhans cells, keratinocytes, and gastric fundus Parietal and Chief cells. The receptor for IL-36Ra/IL-1F5 has not been positively identified. Indirect evidence suggests it is IL-1 Rrp2 and/or IL-1 RAcP. In either case, activity association with receptor binding is also unclear. It was initially reported to be an antagonist of IL-36 gamma /IL- 1F9 activity. This would be consistent with its hypothesized relationship to IL- 1ra. Studies, however, find IL-36Ra/IL-1F5 antagonist activity difficult to demonstrate.

### Product Properties

<b>Synonyms</b>	IL-1RP3, IL-1HY1, IL-1 delta, IL-1F5, IL-1ra homolog 1, IL-1L1
<b>Accession</b>	Q9UBH0
<b>GeneID</b>	26525
<b>Source</b>	E.coli-derived human Interleukin-36 Receptor Antagonist protein, Val2-Asp155.
<b>Molecular Weight</b>	Approximately 16.8 kDa.
<b>AA Sequence</b>	VLSGALCFRM KDSALKVLYL HNNQLLAGGL HAGKVIK GEE ISVVPNRWLD ASLSPVILGV QGGSQCLSCG VGQEPTLTLE PVNIMELYLG AKESKSFTFY RRDMLTSSF ESAAYPGWFL CTVPEADQPV RLTQLPENGG WNAPITDFYF QQCD
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 95% by SDS-PAGE and HPLC analyses.

---

<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by inhibiting IL-36 beta induced IL-8 secretion by human preadipocytes is less than 1.0 µg/ml, corresponding to a specific activity of > 1000 IU/mg in the presence of 20 ng/ml of recombinant human IL-36 beta.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

---

## Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.