

## Recombinant Human Interleukin-36 Receptor Antagonist Protein

### Information

<b>Gene ID</b>	26525
<b>Accession #</b>	Q9UBH0
<b>Alternate Names</b>	IL-1RP3, IL-1HY1, IL-1 delta, IL-1F5, IL-1ra homolog 1, IL-1L1
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 16.8 kDa, a single non-glycosylated polypeptide chain containing 154 amino acids.
<b>AA Sequence</b>	VLSGALCFRM KDSALKVLYL HNNQLLAGGL HAGKVIKGEE ISVVPNRWLD ASLSPVILGV QGGSQCLSCG VGQEPTLTLE PVNIMELYLG AKESKSFTFY RRDMGLTSSF ESAAYPGWFL CTVPADQPV RLTQLPENGW WNAPITDFYF QQCD
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED 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>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	5µg	100µg	500µg
Recombinant Human Interleukin-36 Receptor Antagonist Protein	5µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIL-36RA as determined by LAL method.

## Description

Interleukin-36 receptor antagonist (IL-36RA) is a secreted protein which belongs to the interleukin 1 cytokine family (IL-1 family) and it is predominantly expressed in keratinocytes but not in fibroblasts, endothelial cells or melanocytes. IL-36RA has been reported to antagonize the biological activity of IL-36  $\alpha$  (IL-1F6), IL-36  $\beta$  (IL-1F8), and IL-36  $\gamma$  (IL-1F9). Furthermore, it could constitute part of an independent signaling system analogous to interleukin-1 alpha (IL-1A), beta (IL-1B) receptor agonist and interleukin-1 receptor type I (IL-1R1). In addition, The receptor for IL-36RA has not been positively identified. Indirect evidence suggests it is IL-1Rrp2. Recombinant human IL-36 RA contains 154 amino acid residues and it shares 91 % a.a. sequence identity with murine IL-36RA.

## Reference

1. Born TL, Smith DE, Garka KE, et al. 2000. J Biol Chem. 275:41528
2. Dunn EF, Gay NJ, Bristow AF, et al. 2003. Biochemistry. 42:10938-44
3. Barton JL, Herbst R, Bosisio D, et al. 2000. Eur J Immunol. 30:3299-308
4. Debets R, Timans JC, Homey B, et al. 2001. J Immunol. 167:1440-6
5. Towne JE, Renshaw BR, Douangpanya J, et al. 2011. J Biol Chem. 286:42594-602.

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**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)