

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

## ChemWhat Technical Data Sheet (TDS)

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<b>Catalog Number:</b>	101-36G
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 16.8 kDa, a single non-glycosylated polypeptide chain containing 154 amino acids.
<b>Quantity:</b>	5µg/25µg/1000µg
<b>AA Sequence:</b>	VLSGALCFRM KDSALKVLYL HNNQLLAGGL HAGKVIK GEE ISVVPNRWLD ASLSPVILGV QGGSQCLSCG VGQEPTLTLE PVNIMELYLG AKESKSFTFY RRDMGLTSSF ESAAYPGWFL CTVPEADQPV RLTQLPENGG WNAPITDFYF QQCD
<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>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 1 EU/µg of rHuIL-36RA as determined by LAL method.
<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>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

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### *Human Interleukin-36 Receptor Antagonist Protein*

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.