

## Recombinant Mouse IL-36Ra (IL-1F5) (carrier-free)

<b>Catalog# / Size</b>	760804 / 25 µg 760806 / 100 µg
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	IL-36 receptor antagonist protein, IL-36RN, IL-1F5, IL-1HY1, IL-1 delta, IL-1L1, FIL1 delta
<b>Description</b>	<p>IL-36Ra belongs to the IL-1 cytokine family, as a receptor antagonist. Like other IL-36 cytokines, IL-36Ra does not contain caspase cleavage sites, but removal of N-terminal methionine is required for its full activity, which might be mediated by neutrophil elastase. IL-36Ra shares sequence homology with IL-Ra, another receptor antagonist of the IL-1 family. IL-36Ra inhibits IL-36α, IL-36β, IL-36γ signaling by preventing their binding to IL-1RL2/IL-36R and the recruitment of IL-1RAP co-receptor, leading to blockage of downstream NF-κB and MAP kinase activation. The mechanism of inhibition is similar to the one that is established between IL-1Ra and IL-1. IL-36 Ra is involved in innate immunity and anti-inflammatory responses. IL-36Ra attenuates IL-36 cytokine-induced pro-inflammatory cytokine production by bone marrow derived dendritic cells and antagonizes IL-36 cytokine-induced IFN-γ, IL-4, and IL-17 production in CD4<sup>+</sup> T cells. In addition, the anti-inflammatory effect of IL-36Ra in brain is SIGIRR/TIR8-dependent. The deficiency of IL-36Ra is linked to psoriasis in humans. The deficit of IL-36Ra exacerbates skin inflammation in IL-36α transgenic mice, suggesting the importance of IL-36Ra as anti-inflammatory cytokine. The expression of IL-36Ra is induced by PMA and LPS in THP-1 cells and by <i>Aspergillus fumigatus</i> in human PBMCs.</p>

### Product Details

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<b>Source</b>	Mouse IL-36Ra, amino acids Val2-Asp155 (Accession# BC132600) was expressed in <i>E.coli</i> .
<b>Molecular Mass</b>	The 154 amino acid recombinant protein has a predicted molecular mass of approximately 17 kD. The DTT-reduced and non-reduced protein migrate at approximately 17 kD by SDS-PAGE. The predicted N-terminal amino acid is Val.
<b>Purity</b>	>95%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	0.22 µm filtered protein solution is in 1x PBS.
<b>Endotoxin Level</b>	Less than 0.01 ng per µg cytokine as determined by the LAL method.
<b>Concentration</b>	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg size and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Activity</b>	The activity is determined by the dose-dependent inhibition of mouse IL-36β-induced IL-6 secretion in 3T3-L1 preadipocytes. The ED <sub>50</sub> is 0.5 - 2 µg/ml in the presence of 3 ng/ml of mouse IL-36β.
<b>Application</b>	<a href="#">Bioassay</a>
<b>Application Notes</b>	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our <a href="#">100% satisfaction guarantee</a> . If you have any concerns, contact us at <a href="mailto:tech@biolegend.com">tech@biolegend.com</a> .

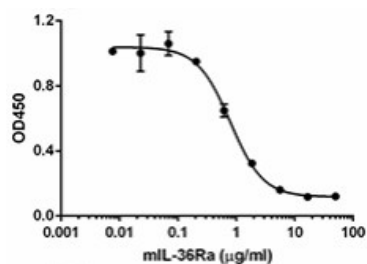
## Antigen Details

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<b>Structure</b>	IL-1 cytokine family.
<b>Distribution</b>	Skin keratinocytes, detectable in splenocytes, and macrophage cell types.
<b>Function</b>	IL-36Ra is involved in anti-inflammatory response and prevents IL-36 cytokine-induced effect.
<b>Interaction</b>	Dendritic cells and lymphocytes.
<b>Ligand/Receptor</b>	IL-1RL2/IL-36R and IL-1RAcP.
<b>Biology Area</b>	Angiogenesis, Cell Biology, Immunology, Innate Immunity, Signal Transduction
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Garlanda C, <i>et al.</i> 2013. <i>Immunity</i> 39:1003.</li><li>2. Towne JE, <i>et al.</i> 2011. <i>J. Biol. Chem.</i> 286:42594.</li><li>3. Vigne S, <i>et al.</i> 2011. <i>Blood</i> 118:5813.</li><li>4. Costelloe C, <i>et al.</i> 2008. <i>J. Neurochem.</i> 105:1960.</li><li>5. Debets R, <i>et al.</i> 2001. <i>J. Immunol.</i> 167:1440.</li><li>6. Blumberg H, <i>et al.</i> 2007. <i>J. Exp. Med.</i> 204:2603.</li><li>7. Marrakchi S, <i>et al.</i> 2011. <i>N. Engl. J. Med.</i> 365:620.</li><li>8. Macleod T, <i>et al.</i> 2016. <i>Sci. Rep.</i> 6:24880.</li><li>9. Mulero JJ, <i>et al.</i> 1999. <i>Biochem. Biophys. Res. Commun.</i> 263:702.</li></ol>
<b>Gene ID</b>	<a href="#">54450</a>

## Product Data

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Dose-dependent inhibition of mouse IL-36 $\beta$ -induced IL-6 secretion in 3T3-L1 cells.

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