

Recombinant Human IL-36 γ (Animal-Free)

Catalog# / Size	711602 / 10 μ g
Regulatory Status	RUO
Other Names	IL-1F, IL-1 ϵ , IL-1H1
Description	<p>The IL-1 family is a group of cytokines comprised of 11 members, including recently renamed IL-36 cytokines, IL-36α, β and γ (previously known as IL-1F6, IL-1F8 and IL-1F9). IL-36γ signals through the IL-1 receptor family members IL-1Rrp2 and IL-1RAcP and can activate downstream MAP kinases and transcription factor NF-κB. IL-36γ is synthesized without signal peptide and the secretion pathway is unclear. It has been shown that, like other IL-36 cytokines, N-terminal processing of IL-36γ can significantly increase its biological activity. The possible processing enzymes are currently unknown. IL-36γ also plays a significant role in immune response. Low level of IL-36 receptor IL-1Rrp can be detected on bone marrow-derived dendritic cells and CD4⁺ T cells. IL-36γ treatment can upregulate CD80, CD86 and MHC Class II, and proinflammatory cytokine production in dendritic cells. IL-36γ has also been implicated in airway hyperresponsiveness. Intranasal administration of recombinant IL-36γ in mice leads to epithelial cell hypertrophy, cellular infiltration, and mucus production. IL-36γ expression in the lungs of mice can be upregulated by allergic inflammation.</p>

Product Details

Source	Human IL-36 γ , amino acids Ser18-Asp169 (Accession# Q9NZH8), was expressed in <i>E. coli</i> .
Molecular Mass	The 152 amino acid recombinant protein has a predicted molecular mass of approximately 17 kD. The predicted N-terminal amino acid is Ser.
Purity	>98%, as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Formulation	Lyophilized, carrier-free.
Endotoxin Level	Less than 0.1 ng per μ g of protein.
Storage & Handling	Unopened vial can be stored at -20°C or -70°C. For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. It is recommended to further dilute in a buffer, such as 5% Trehalose, and store working aliquots at -20°C to -80°C. Avoid repeated freeze/thaw cycles.
Activity	Measured by its ability to induce IL-8 production by human PBMCs.
Application	Bioassay

Antigen Details

Structure	IL-1 family cytokine.
Distribution	Peripheral blood lymphocytes, keratinocytes, bronchial epithelial cells, THP-1.
Function	IL-36 γ is a proinflammatory cytokine. In the skin, IL-36 γ is primarily expressed by keratinocytes and its expression can be upregulated by inflammatory cytokines, toll-like receptor ligands, and some pathological conditions. IL-36 γ is highly induced in psoriasis plaques. In THP-1 cells, LPS can induce IL-36 γ production. T-bet dependent induction of IL-36 γ has also been reported in several myeloid cells.
Interaction	Dendritic cell, macrophage, lung fibroblast cells.
Ligand/Receptor	A combination of IL-1Rrp2 and IL-1RAcP.
Biology Area	Angiogenesis, Cell Biology, Immunology, Innate Immunity, Signal Transduction
Molecular Family	Cytokines/Chemokines
Antigen References	1. Blumberg H, <i>et al.</i> 2007. <i>J. Exp. Med.</i> 204:2603.

2. Vigne S, *et al.* 2011. *Blood*. 118: 5813.
3. Ramadas RA, *et al.* 2006. *Immunogenetics*. 58:851.
4. Carrier Y, *et al.* 2011. *J. Invest. Dermatol.* 131:2428.
5. Debets R, *et al.* 2001. *J. Immunol.* 167:1440.
6. Towne J, *et al.* 2004. *J. Biol. Chem.* 279:13677.
7. Towne J, *et al.* 2011. *J. Biol. Chem.* 286:42594.

Gene ID

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