



# Recombinant Protein Technical Manual

## Recombinant Mouse Interleukin-36b/IL-36b Protein

RPES1944

### Product Data:

**Product SKU:** RPES1944

**Size:** 10µg

**Species:** Mouse

**Expression host:** E. coli

**Uniprot:** Q9D6Z6

### Protein Information:

**Molecular Mass:** 17.6 kDa

**AP Molecular Mass:** 16 kDa

**Tag:**

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM Tris,150mM NaCl,1mM EDTA,pH 8.0.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Il36b;Interleukin-36 beta;Interleukin family member 8;ILF8;Fil1e; Il1f8

## Immunogen Information:

**Sequence:** Ser31-Lys183

## Background:

Mouse Interleukin 36 beta (IL-36B) is a member of the IL family of proteins. It is a cytokine that binds to and signals through the IL1RL2/IL-36R receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells linked to a pro-inflammatory response. IL-36B is synthesized in several cells including resting and activated monocytes, and B cells. The receptor for IL-36 beta is thought to be a combination of IL Rrp2 and IL RAcP. Interleukin 36 beta is one part of the IL-36 signaling system that is thought to be present in epithelial barriers and to take part in local inflammatory response; similar to the IL system with which it shares the coreceptor IL1RAP. Interleukin 36 beta are involved in a number of fundamental biological processes such as stimulating production of interleukin-6 and interleukin-8 in synovial fibroblasts, articular chondrocytes and mature adipocytes, inducing expression of a number of antimicrobial peptides including beta-defensin 4 and beta-defensin 103 as well as a number of matrix metalloproteases, inducing the production of proinflammatory cytokines in bone marrow-derived dendritic cells (BMDCs), including IL2, IL-6, TNF-alpha and IL-23, and activating p38 MAPK phosphorylation in BMDCs. Moreover, interleukin 36 beta may be involved in skin inflammatory response by acting on keratinocytes, dendritic cells, and indirectly on T cells to drive tissue infiltration, cell maturation and cell proliferation. It plays an important role in dendritic cell maturation by stimulating the surface expression of CD80, CD86 and MHC class II and inducing the production of IFN-gamma, IL-4 and IL7 by T helper 1 (Th1) cells, cultured CD4+ T cells and splenocytes.