

## IL-1 beta/IL-1F2 Protein, Rat, Recombinant (mature form)

### General Information

Synonyms:	interleukin 1, beta;interleukin 1, $\beta$ ;IL-1 $\beta$
Protein Construction:	A DNA sequence encoding the mature form of rat IL1B (Q63264-1) (Val 117-Ser 268) was expressed and purified. Predicted N terminal: Met
Species:	Rat
Expression Host:	E. coli
Accession:	Q63264-1
Molecular Weight:	17.4 kDa (predicted); 16.92 kDa (reducing conditions)

### QC Testing

Biological Activity:	Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 for this effect is typically 0.1-0.5 $\mu$ g/mL.
Purity:	> 98 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 40 mM Tris, 0.15 M NaCl, pH 7.8. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Interleukin-1 beta (IL1 beta or IL1B) also known as catabolin, is a member of the interleukin 1 cytokine family. IL1 is a pleiotropic cytokine. It is involved in the inflammatory response, cell growth, and tissue repair in the cortex. The IL1 superfamily consists of three members, IL1A (IL1 alpha), IL1B (IL1 beta), and IL1 receptor antagonist (IL1Ra). In clinical, it has been reported that Interleukin (IL)-1 may influence Th1 / Th2 immune responsiveness and has been implicated in the establishment of a successful pregnancy. Proinflammatory interleukin (IL)-1 gene

polymorphisms associated with high levels of IL-1beta activity increase the risk for hypochlorhydria and distal gastric carcinoma. IL1B polymorphisms may be involved in susceptibility to SSc. Moreover, the IL2-384-G allele may be a marker for the limited phenotype of systemic sclerosis (SSc).  
Cancer Immunotherapy  
Immune Checkpoint  
Immunotherapy  
Targeted Therapy

### Reference

Kim SH, et al. (2008) Association of -31TC and -511 CT polymorphisms in the interleukin 1 beta (IL1B) promoter in Korean keratoconus patients. *Mol Vis.* 14:2109-16.

Wang ZC, et al. (2002) T helper 1-type immunity to trophoblast antigens in women with a history of recurrent pregnancy loss is associated with polymorphism of the IL1B promoter region. *Genes Immun.* 3(1): 38-42.

Mattuzzi S, et al. (2007) Association of polymorphisms in the IL1B and IL2 genes with susceptibility and severity of systemic sclerosis. *J Rheumatol.* 34(5): 997-1004.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286    E\_mail: info@targetmol.com    Address: 34 Washington Street, Wellesley Hills, MA 02481