



## Genorise® Recombinant Equine IL-1 $\beta$

Catalog Number: GR104001

### Background

Interleukin-1 beta (IL-1 $\beta$ ) also known as catabolin, is a member of the interleukin 1 cytokine family. IL-1 $\beta$  precursor is cleaved by caspase 1 (interleukin 1 beta convertase). Cytosolic thiol protease cleaves the product to form mature IL-1 $\beta$ . Interleukin-1 alpha and interleukin-1 beta forms IL-1 (1, 2, 3).

IL-1 $\beta$  is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. IL-1 $\beta$  gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2(4).

### References

1. Auron PE, et al (1984). Proc Natl Acad Sci U S A 81 (24): 7907–11.
2. March CJ, et al. (1985). Nature 315 (6021): 641–7.
3. Clark BD, et al (1986). Nucleic Acids Res 14 (20): 7897–1914.
4. Entrez Gene: IL1B interleukin 1, beta.  
<http://www.ncbi.nlm.nih.gov/sites/entrez?Db=gene&Cmd=ShowDetailView&TermToSearch=3553>.



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### Description

Quantity: 10  $\mu$ g

Accession #: NP\_001075995.1

Sources: expressed in *E. coli*.

Composition: Met1-Ala268

Molecular weight: 30 kDa

Activity: Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. Symons, J.A. *et al.* (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 272.

The ED50 for this effect is typically 10-35 pg/ml.

Endotoxin level: < 1.0 EU per 1  $\mu$ g of the protein by the LAL method.

Purity: > 98%, by SDS-PAGE under reducing conditions and visualized by silver staining.

Formulation: Lyophilized from a 0.2  $\mu$ m filtered solution in PBS with BSA as a carrier protein.

Reconstitution: Reconstitute at 50  $\mu$ g/ml in sterile PBS and store at -20°C ~ -70°C for up to 1 month.

Shipping and storage: The product is shipped at ambient temperature or with ice pad. Upon receipt, store it immediately at -20°C to avoid loss of activity and use it in 3 months.

### DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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