10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IL-1β

Catalog # PVGS1289

Product Information

Primary Accession	Q63264
Species	Rat
Sequence	VPIRQLHCRL RDEQQKCLVL SDPCELKALH LNGQNISQQV VFSMSFVQGE TSNDKIPVAL GLKGLNLYLS CVMKDGTPTL QLESVDPKQY PKKKMEKRFV FNKIEVKTKV EFESAQFPNW YISTSQAEHR PVFLGNSNGR DIVDFTMEPV SS
Purity	> 95% as analyzed by SDS-PAGE.
Endotoxin Level	
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 □g/ml.

Additional Information

Other Names	Interleukin-1 beta, IL-1 beta, Il1b {ECO:0000312|RGD:2891}
Target Background	Interleukin-1β is a proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1 alpha and IL-1 beta binds to the same receptor and has similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1 beta is a secreted cytokine, IL-1 alpha is predominantly a cell-associated cytokine.

Protein Information

Name	Il1b {ECO:0000312|RGD:2891}
Function	Potent pro-inflammatory cytokine. Initially discovered as the major endogenous pyrogen, induces prostaglandin synthesis, neutrophil influx and activation, T-cell activation and cytokine production, B- cell activation and antibody production, and fibroblast proliferation and collagen production. Promotes Th17 differentiation of T-cells. Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T- helper 1 (Th1) cells. Plays a role in angiogenesis by inducing VEGF production synergistically with TNF and IL6. Involved in transduction of inflammation downstream of pyroptosis: its mature form is specifically released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore.

Cellular Location	Cytoplasm, cytosol {ECO:0000250|UniProtKB:P01584}. Secreted {ECO:0000250|UniProtKB:P01584}. Lysosome {ECO:0000250|UniProtKB:P01584}. Secreted, extracellular exosome {ECO:0000250|UniProtKB:P10749}. Note=The precursor is cytosolic. In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted. Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore. In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation. The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10. {ECO:0000250|UniProtKB:P01584}