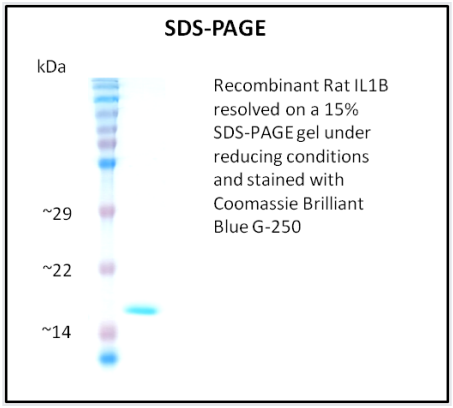
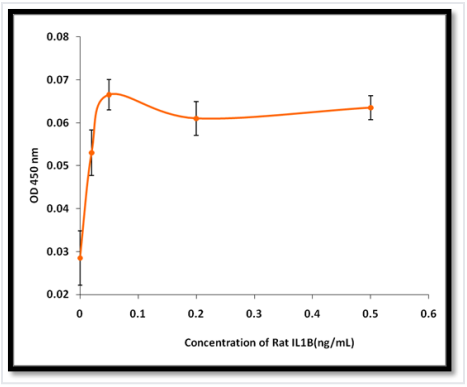
IL1B Rat Active Protein

PRODUCT OVERVIEW

Product Name	IL1B, Active Protein
Full Product Name	Recombinant Rat IL1B
Product Gene Name	IL1B active protein
Product Synonym Names	IL-1b; Recombinant Rat Interleukin-1 Beta (IL1B)
Host	E Coli
Form/Format	Lyophilized from a 0.2 um filtered solution in PBS, pH 7.
Purity/Purification	>95% as determined by SDS-PAGE
Preparation and Storage	The lyophilized protein is stable for at least one year from date of receipt at-70 degree C. Upon reconstitution, this cytokine can be stored in working aliquots at 2-8 degree C for one month, or at-20 degree C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.
Molecular Weight	17.0 kDa
3D Structure	ModBase 3D Structure for Q63264
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Bioactivity	The ED(50) was determined by the dose-dependent stimulation of thymidine uptake by murine D10S cells is <= 2.0 pg/mL, corresponding to a specific activity of >= 5.0 x 10^8 units/mg.
Endotoxin Level	<1.0 EU/ug of recombinant protein as determined by the LAL method.
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Related Product Information for IL1B active protein	Monocytes are the main source of secreted IL-1. They express predominantly IL-1-beta while human keratinocytes express large amounts of IL-1-alpha. Murine macrophages display a transition from IL-1-beta to IL-1-alpha production during maturation of monocytes into inflammatory macrophages. There are two functionally almost equivalent forms of IL-1, IL-1-alpha and IL-1-beta that are encoded by two different genes. IL-1-beta is the predominant form in humans while it is IL-1-alpha in mice. Both forms of IL-1 bind to the same receptor and therefore also show similar if not identical biological activities. The IL-1-beta but not the IL-1-alpha precursor must be processed before it can bind to the receptor. Both forms of IL-1 bind to the same receptor and therefore also show similar if not identical biological activities. The receptor isolated from T cells is expressed predominantly on T cells and cells of mesenchymal origin. It binds both types of IL-1 with equal affinity. This type is called also Type 1 receptor. It has been designated CD121a. The Type 2 receptor has been designated CD121b. It is isolated from B cells, granulocytes, and macrophages. It is expressed predominantly on B cells and cells of the myelomonocytic lineage and is encoded by a separate gene.
Other Notes	Small volumes of IL1B active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IL1B purchase	MBS4159985 is an active protein targeting IL1B. Also known as Recombinant Rat IL1B. Host: E Coli.



Testing Data of IL1B active protein



Testing Data of IL1B active protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL1B. It may not necessarily be applicable to this product.

NCBI GI #	2497335
NCBI GeneID	24494
NCBI Accession #	Q63264.1
UniProt Primary Accession #	Q63264
UniProt Related Accession #	Q63264
NCBI Official Full Name	Interleukin-1 beta
NCBI Official Synonym Full Names	interleukin 1 beta
NCBI Official Symbol	Il1b
NCBI Official Synonym Symbols	IL-1F2
UniProt Protein Name	Interleukin-1 beta
Protein Family	Interleukin
UniProt Gene Name	Il1b
UniProt Synonym Gene Names	IL-1 beta
UniProt Entry Name	IL1B_RAT
NCBI Protein Information	interleukin-1 beta
NCBI Summary for IL1B	an inflammatory cytokine [RGD, Feb 2006]

UniProt Comments for IL1B	IL1B: Produced by activated macrophages, IL-1 stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells. Monomer. Belongs to the IL-1 family. Protein type: Cytokine Cellular Component: extracellular space; extracellular region; vesicle; secretory granule Molecular Function: protein domain specific binding; interleukin-1 receptor binding; cytokine activity Biological Process: positive regulation of granulocyte macrophage colony-stimulating factor production; positive regulation of JNK activity; negative regulation of MAP kinase activity; positive regulation of nitric oxide biosynthetic process; negative regulation of glutamate secretion; glycoprotein metabolic process; positive regulation of apoptosis; activation of MAPK activity; positive regulation of interleukin-2 biosynthetic process; positive regulation of transcription, DNA-dependent; germ cell programmed cell death; response to glucocorticoid stimulus; negative regulation of insulin receptor signaling pathway; positive regulation of NF-kappaB import into nucleus; positive regulation of glial cell differentiation; positive regulation of lipid catabolic process; response to lipopolysaccharide; fever; response to organic cyclic substance; positive regulation of membrane protein ectodomain proteolysis; response to carbohydrate stimulus; activation of NF-kappaB transcription factor; elevation of cytosolic calcium ion concentration; response to vitamin D; pentacyclic triterpenoid metabolic process; positive regulation of phagocytosis; positive regulation of T cell proliferation; positive regulation of astrocyte differentiation; response to drug; neutrophil chemotaxis; positive regulation of I-kappaB kinase/NF-kappaB cascade; positive regulation of heterotypic cell-cell adhesion; positive regulation of mitosis; interleukin-1 beta production; positive regulation of interleukin-6 production; social behavior; response to organic nitrogen; purine base metabolic process; negative regulation of neuron differentiation; positive regulation of angiogenesis; response to ethanol; response to heat; positive regulation of cell division; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription factor activity; negative regulation of lipid metabolic process; leukocyte migration; response to peptide hormone stimulus; estrogen metabolic process; sequestering of triacylglycerol; wound healing; positive regulation of interleukin-6 biosynthetic process; response to morphine; positive regulation of JNK cascade; negative regulation of transcription from RNA polymerase II promoter; response to L-ascorbic acid; chronic inflammatory response to antigenic stimulus; response to estradiol stimulus; positive regulation of stress-activated MAPK cascade; negative regulation of neurogenesis; positive regulation of interleukin-8 production; negative regulation of cell proliferation; learning and/or memory; negative regulation of lipid catabolic process; hyaluronan biosynthetic process; protein kinase B signaling cascade; lipopolysaccharide-mediated signaling pathway; response to gamma radiation; inflammatory response; regulation of I-kappaB kinase/NF-kappaB cascade; response to nutrient; aging; cytokine and chemokine mediated signaling pathway; MAPKKK cascade; positive regulation of immature T cell proliferation in the thymus; memory; response to ATP; ovulation; polyketide metabolic process; positive regulation of interferon-gamma production; positive regulation of chemokine biosynthetic process; response to ozone; positive regulation of prostaglandin secretion; response to hypoxia; positive regulation of fever; immune response; positive regulation of protein amino acid phosphorylation; regulation of insulin secretion
Research Articles on IL1B	**1.** Hypercapnia-induced IL-1Beta overproduction via activation of the NLRP3 inflammasome, contributes to cognitive impairments.
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