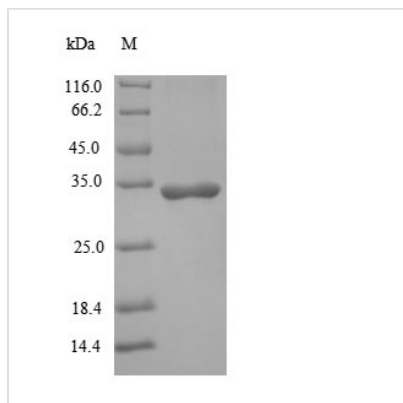


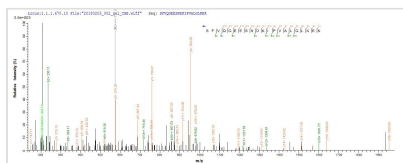


Recombinant Human Interleukin-1 beta (IL1B)

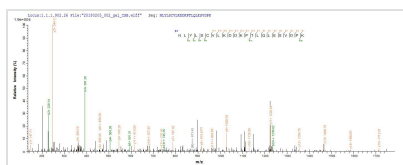
Product Code	CSB-EP011614HU
Relevance	Produced by activated macrophages, IL-1 stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells.
Abbreviation	Recombinant Human IL1B protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P01584
Alias	Catabolin
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	APVRSLNCTLRDSQQKSLVMSGPYELKALHLQGQDMEQQVVFMSFSFVQGEE SNDKIPVALGLKEKNLYLSCVLKDDKPTLQLESVDPKNYPKKKMEKRFVFNKIEI NNKLEFESAQFPNWIYSTSQAENMPVFLGGTKGGQDITDFTMQFVSS
Research Area	Immunology
Source	E.coli
Target Names	IL1B
Protein Names	Recommended name: Interleukin-1 beta Short name= IL-1 beta Alternative name(s): Catabolin
Expression Region	117-269aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	33.4kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP011614HU could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) IL1B.



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Description

The gene fragment corresponding to the 117-269aa of the human IL1B protein was synthesized, with appropriate restriction sites suitable for in-frame cloning into an expression vector, with N-terminal 6xHis-SUMO tag. The E.coli was transformed with the expression vector, and the clone was expressed upon certain induction. After the induced cell centrifugation, the recombinant protein was purified from the cell extract and presented as N-terminal 6xHis-SUMO-tagged fusion. Its purity is greater than 90% assayed by SDS-PAGE. The IL1B protein ran to a band of about 33 kDa molecular weight on the gel.

Interleukin 1beta is a proinflammatory cytokine encoded by the IL1B gene located on chromosome 2. Interleukin levels are normally low in the CNS but are elevated after acute injury and in chronic neurodegenerative diseases such as Alzheimer's disease (AD). IL1 gene variants should be considered disease modifiers in RA. Some researches found that the rare allele of the IL-1B is associated with the destructive pattern characteristic of chronic RA. The pro-inflammatory cytokine IL-1 is produced by the inflammatory synovium and appears to play a predominant role in the destructive pattern associated with RA. It is a known activator of collagenase and stromelysin and inhibits the synthesis of collagen and proteoglycan. In addition, p62-induced autophagic degradation of caspase-1 accounted for caspase-1/IL1B inactivation in CD44s deficient cells. Many findings implied that IL1B polymorphisms modulate cystic fibrosis lung disease.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final



concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.

Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.