

Product datasheet

Recombinant Sheep IL-1 beta protein (His tag) ab235558

[1 Image](#)

Description

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| Product name | Recombinant Sheep IL-1 beta protein (His tag) |
| Purity | > 90 % SDS-PAGE. |
| Expression system | Escherichia coli |
| Accession | <u>P21621</u> |
| Protein length | Full length protein |
| Animal free | No |
| Nature | Recombinant |
| Species | Sheep |
| Sequence | AAVQSVKCKLQDREQSLVLDSPCVLKALHLPSQEMSR EVLFCMSFVQGE ERDNKIPVALGIRDKNLYLSCVKKGDPTLQLEEVDPKVYP KRNMEKRFV FYKTEIKNTVEFESVLYPNWYISTSQIEEKPVFLGRFRGGQ DITDFRMET LSP |
| Predicted molecular weight | 22 kDa including tags |
| Amino acids | 114 to 266 |
| Tags | His tag N-Terminus |
| Additional sequence information | This product is the mature full length protein from aa 114 to 266. The propeptide is not included. N-terminal 6xHis-tagged. |

Specifications

Our **Abpromise guarantee** covers the use of **ab235558** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications SDS-PAGE

Form Liquid

Preparation and Storage

Stability and Storage

Shipped at 4°C. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 7.2

Constituents: Tris buffer, 50% Glycerol (glycerin, glycerine)

General Info

Function

Potent proinflammatory 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.

Tissue specificity

Expressed in activated monocytes/macrophages (at protein level).

Sequence similarities

Belongs to the IL-1 family.

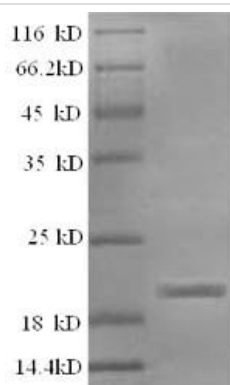
Post-translational modifications

Activation of the IL1B precursor involves a CASP1-catalyzed proteolytic cleavage. Processing and secretion are temporarily associated.

Cellular localization

Cytoplasm, cytosol. Lysosome. Secreted, exosome. Cytoplasmic vesicle, autophagosome. Secreted. 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. IL1B lacks any known signal sequence and the pathway(s) of its secretion is(are) not yet fully understood (PubMed:24201029). On the basis of experimental results, several unconventional secretion mechanisms have been proposed. 1. Secretion via secretory lysosomes: a fraction of CASP1 and IL1B precursor may be incorporated, by a yet undefined mechanism, into secretory lysosomes that undergo Ca(2+)-dependent exocytosis with release of mature IL1B (PubMed:15192144). 2. Secretory autophagy: IL1B-containing autophagosomes may fuse with endosomes or multivesicular bodies (MVBs) and then merge with the plasma membrane releasing soluble IL1B or IL1B-containing exosomes (PubMed:24201029). However, autophagy impacts IL1B production at several levels and its role in secretion is still controversial. 3. Secretion via exosomes: ATP-activation of P2RX7 leads to the formation of MVBs containing exosomes with entrapped IL1B, CASP1 and other inflammasome components. These MVBs undergo exocytosis with the release of exosomes. The release of soluble IL1B occurs after the lysis of exosome membranes (By similarity). 4. Secretion by microvesicle shedding: activation of the ATP receptor P2RX7 may induce an immediate shedding of membrane-derived microvesicles containing IL1B and possibly inflammasome components. The cytokine is then released in the extracellular compartment after microvesicle lysis (PubMed:11728343). 5. Release by translocation through permeabilized plasma membrane. This may occur in cells undergoing pyroptosis due to sustained activation of the inflammasome (By similarity). These mechanisms may not be mutually exclusive.

Images



SDS-PAGE - Recombinant Sheep IL-1 beta protein
(His tag) (ab235558)

(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) analysis with 5% enrichment gel and 15% separation gel of ab235558.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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