

Product datasheet

Recombinant human IL-6 protein (Active) ab259381

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Description

Product name	Recombinant human IL-6 protein (Active)	
Biological activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by the dose-dependant Proliferation of TF-1 cells is 0.8067 ng/mL corresponding to a specific activity of 1.24 x 10 ⁶ IU/mg.	
Purity	≥ 95 % SDS-PAGE. Purity by HPLC ≥95%.	
Endotoxin level	< 0.005 Eu/μg	
Expression system	HEK 293 cells	
Accession	<u>P05231</u>	
Protein length	Full length protein	
Animal free	Yes	
Carrier free	Yes	
Nature	Recombinant	
Species	Human	
Sequence	APVPPGEDSKDVAAPHRQPLTSSERIDKQIRYILDGISALR KETCNKSNM CESSKEALAENNLNLPKMAEKDGCQSGFNEETCLVKIIT GLLEFEVYLE YLQNRFESSEEQARAVQMSTKVLIQFLQKKAKNLDAITTP DPTTNASLLT KLQAQNQWLQDMTTHLILRSFKEFLQSSLRALRQM	
Predicted molecular weight	21 kDa	
Molecular weight information	M+1 Da, pass (+203 Da: Hex, +203: HexNAc, +291:NeuAc).	
Amino acids	28 to 212	
Additional sequence information	N-terminal glycine. Mature chain.	

Specifications

Our **Abpromise guarantee** covers the use of **ab259381** in the following tested applications.

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

Applications Cell Culture

Sandwich ELISA
Functional Studies
Mass Spectrometry
SDS-PAGE
HPLC

Form Lyophilized

Additional notes This protein is filter sterilized prior to aliquoting and lyophilization. All aliquoting and lyophilization steps are performed in a sterile environment

Preparation and Storage

Stability and Storage Shipped at Room Temperature. Store at Room Temperature.
pH: 6.00
Constituents: 0.727% Dibasic monohydrogen potassium phosphate, 0.248% Monobasic dihydrogen potassium phosphate, 10.26% Trehalose
Buffer lyophilized from.
This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution Reconstitute with phosphate buffered saline. Store lyophilized form at room temperature. Reconstitute, aliquot and store at -80°C for 12 months or +4°C for 1 week. Avoid repeated freeze-thaw. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product.

General Info

Function Cytokine with a wide variety of biological functions. It is a potent inducer of the acute phase response. Plays an essential role in the final differentiation of B-cells into Ig-secreting cells. Involved in lymphocyte and monocyte differentiation. It induces myeloma and plasmacytoma growth and induces nerve cells differentiation. Acts on B-cells, T-cells, hepatocytes, hematopoietic progenitor cells and cells of the CNS. Also acts as a myokine. It is discharged into the bloodstream after muscle contraction and acts to increase the breakdown of fats and to improve insulin resistance.

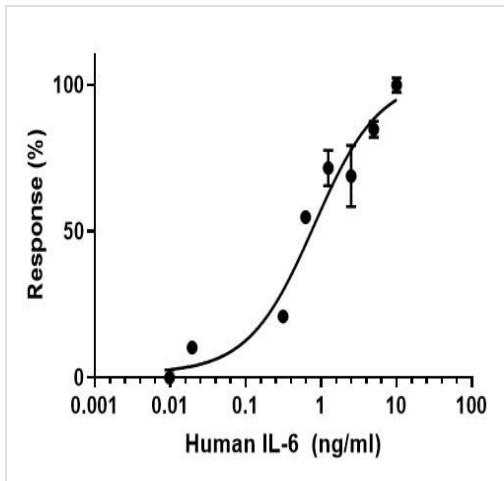
Involvement in disease Genetic variations in IL6 are associated with susceptibility to rheumatoid arthritis systemic juvenile (RASJ) [MIM:604302]. An inflammatory articular disorder with systemic-onset beginning before the age of 16. It represents a subgroup of juvenile arthritis associated with severe extraarticular features and occasionally fatal complications. During active phases of the disorder, patients display a typical daily spiking fever, an evanescent macular rash, lymphadenopathy, hepatosplenomegaly, serositis, myalgia and arthritis.
Note=A IL6 promoter polymorphism is associated with a lifetime risk of development of Kaposi sarcoma in HIV-infected men.

Sequence similarities Belongs to the IL-6 superfamily.

Post-translational modifications N- and O-glycosylated.

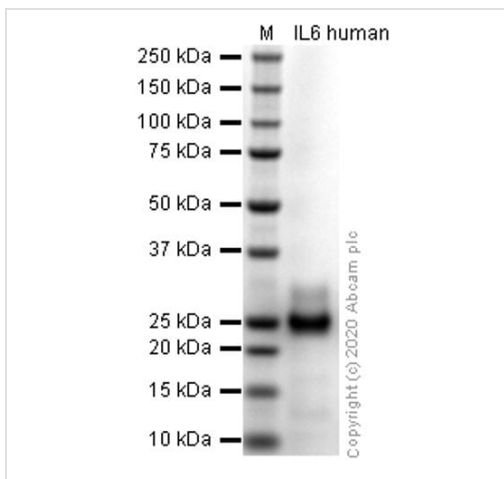
Cellular localization Secreted.

Images



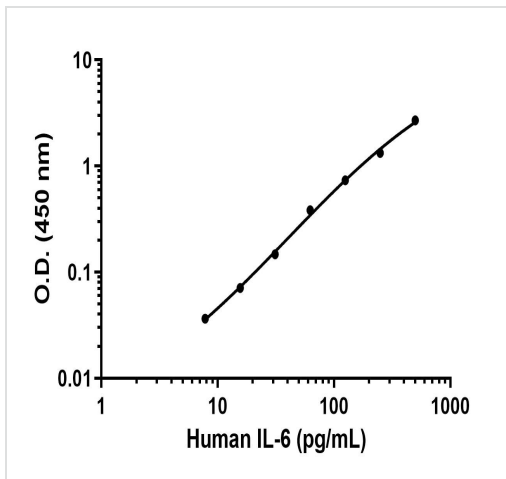
Functional Studies - Recombinant human IL-6 protein (Active) (ab259381)

Fully biologically active when compared to standard. The ED_{50} as determined by the dose-dependant Proliferation of TF-1 cells is 0.8067 ng/mL corresponding to a specific activity of 1.24×10^6 IU/mg.



SDS-PAGE analysis of ab259381.

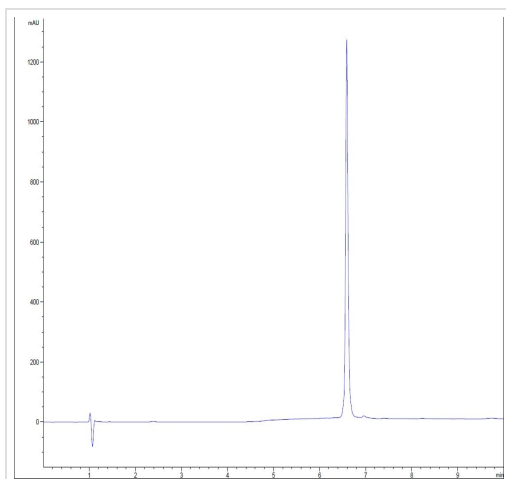
SDS-PAGE - Recombinant human IL-6 protein (Active) (ab259381)



Sandwich ELISA - Recombinant human IL-6 protein (Active) (ab259381)

Sandwich ELISA - Recombinant human IL-6 protein standard curve.

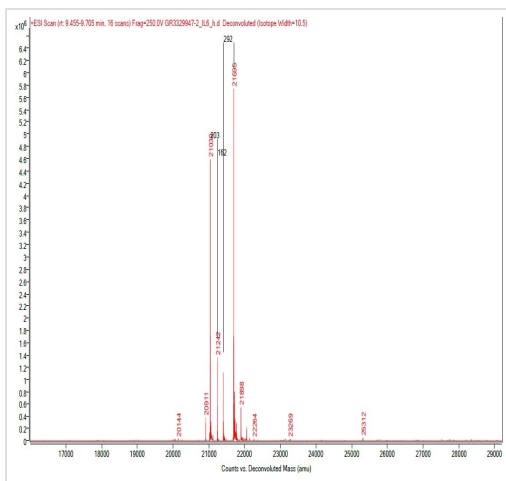
Background subtracted standard curve using Human IL-6 Antibody Pair - BSA and Azide free ([ab243973](#)) and Recombinant human IL-6 protein (Active) (ab259381) in sandwich ELISA. The ELISA was performed using the components of the corresponding SimpleStep® kit, which uses the same antibody pair with a different formulation and format.



HPLC - Recombinant human IL-6 protein (Active) (ab259381)

Purity 99%.

The spectrum was recorded using a 1260 Infinity II HPLC system with DAD and a MabPac RP column (3.0x100 mm, 4 μm). 5 μL of purified protein was injected and the gradient run from 80 % water:TFA (99.9:0.1 v/v) and 20 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) to 20 % water:TFA (99.9:0.1 v/v) and 80 % acetonitrile:water:TFA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 3 min. Flow rate was 0.5 mL/min and the column compartment temperature was 50 °C.



Mass Spectrometry - Recombinant human IL-6 protein (Active) (ab259381)

M+1 Da, pass (+203 Da: Hex, +203: HexNAc, +291:NeuAc).

The spectrum was recorded with a 6545XT AdvanceBio LC/Q-TOF (Agilent Technologies) and a MabPac RP column (42.1x50 mm, 4 μm, Thermo Scientific). 5 μL of purified protein was injected and the gradient run from 85 % water:FA (99.9:0.1 v/v) and 15 % acetonitrile:FA (90:9.9:0.1 v/v/v) to 55 % water:FA (99.9:0.1 v/v) and 45 % acetonitrile:FA (90:9.9:0.1 v/v/v) within 3 minutes followed by an isocratic step for another 2.5 min. Flow rate was 0.4 mL/min and the column compartment temperature was 60 °C. Data was analysed and deconvoluted using the Bioconfirm software (Agilent Technologies).

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

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