

Cytokines

Human Recombinant IL-18 BPa



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Interleukin 18 binding protein isoform a

Catalog #	78209	10 µg
	78209.1	50 µg
	78209.2	1000 µg

Product Description

Interleukin 18 binding protein (IL-18 BP) is a glycoprotein that contains a single IgG domain (C2-type). In humans, alternative splicing of the mRNA results in at least four different isoforms being generated; the most-expressed form in humans is IL-18 BPa (Dinarello et al.; Kim et al.). IL-18 BPa inhibits pro-inflammatory cytokine IL-18 by preventing it from binding to its receptor, thereby inhibiting IL-18-induced IFN-gamma production; the binding of IL-18 BPa to IL-18 is primarily due to the Ig domain (Carrascal et al.; Dinarello et al.). IL-18 is associated with an increase in cell adhesion molecules, chemokine production, stimulating vascular endothelial cells, metastatic tumor cell invasion, autoimmune diseases, emphysema, metabolic syndromes, Crohn's disease, psoriasis, and has also been implicated in a role in heart disease (Dinarello et al.). Some studies have also shown that blocking of IL-18 activity can reduce metastasis in mouse models of melanoma (Carrascal et al.).

Product Information

Alternative Names:	IL18BP, Tadekinig alfa
Accession Number:	O95998
Amino Acid Sequence:	TPVSQTTTAA TASVRSTKDP CPSQPPVFPA AKQCPALEVT WPEVEVPLNG TLSLSCVACS RFPNFSILYW LGNGSFIEHL PGRLWEGSTS RERGSTGTQL CKALVLEQLT PALHSTNFSC VLVDPEQVVQ RHVLAQLWA GLRATLPPTQ EALPSSHSSP QQQG
Predicted Molecular Mass:	17.6 kDa monomer; 35.2 kDa dimer
Species:	Human
Cross Reactivity:	Not determined
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	CHO

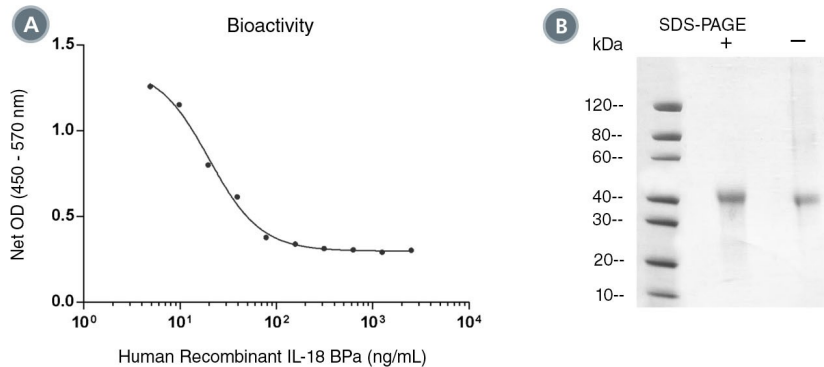
Specifications

Activity:	The specific activity is $\geq 3.3 \times 10^4$ units/mg ($EC_{50} \leq 30$ ng/mL) as determined by the ability to inhibit proliferation of KG-1 cells in the presence of IL-18.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant IL-18 BPα was tested by its ability to inhibit proliferation of KG-1 cells in the presence of 50 ng/mL human IL-18. Inhibition of cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation inhibition is at 50% of maximum. The EC₅₀ in the above example is 20 ng/mL.

(B) Human Recombinant IL-18 BPα was resolved with SDS-PAGE under reducing (+) conditions and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-18 BPα has a predicted molecular mass of 17.6 kDa (monomer) or 35.2 kDa (dimer).

Related Products

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References

- Carrascal MT et al. (2003) Interleukin-18 binding protein reduces B16 melanoma hepatic metastasis by neutralizing adhesiveness and growth factors of sinusoidal endothelium. *Cancer Res* 63(2): 491–7.
- Dinarelli CA et al. (2013) Interleukin-18 and IL-18 binding protein. *Front Immunol* 4: 289.
- Kim SH et al. (2000) Structural requirements of six naturally occurring isoforms of the IL-18 binding protein to inhibit IL-18. *Proc Natl Acad Sci USA* 97(3): 1190–5.

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