Cynomolgus IL-23 alpha & Mouse IL-12 beta Heterodimer Protein (HEK293, His)

Cat. No.:	HY-P77703
Synonyms:	IL23 alpha; IL12 beta; IL23 alpha&IL12 beta
Species:	Cynomolgus
Source:	HEK293
Accession:	A0A2K5TLV4 (V22-P189)&P43432 (M23-S335)
Gene ID:	102128555&16160
Molecular Weight:	22 (Cynomolgus IL23 alpha)&40-50 (Mouse IL12 beta) kDa

PROPERTIES

AA Sequence	V P G G S S P A W A Q C Q Q L S Q K L C T L A W S A H P L V G H M D L R E E G D E E T T N D V P H I Q C G D G C D P Q G L R D N S Q F C L Q R I R Q G L I F Y E K L L G S D I F T G E P S L L P D S P V G Q L H A S L L G L S Q L L Q P E G H H W E T Q Q I P S P S P S Q P W Q R L L L R F K I L R S L Q A F V A V A A R V F A H G A A T L S P & M W E L E K D V Y V V E V D W T P D A P G E T V N L T C D T P E E D D I T W T S D Q R H G V I G S G K T L T I T V K E F L D A G Q Y T C H K G G E T L S H S H L L L H K K E N G I W S T E I L K N F K N K T F L K C E A P N Y S G R F T C S W L V Q R N M D L K F N I K S S S S S P D S R A V T C G M A S L S A E K V T L D Q R D Y E K Y S V S C Q E D V T C P T A E E T L P I E L A L E A R Q Q N K Y E N Y S T S F F I R D I I K P D P P K N L Q M K P L K N S Q V E V S W E Y P D S W S T P H S Y F S L K F F V R I Q R K K E K M K E T E E G C N Q K G A F L V E K T S T E V Q C K G G N V C V Q A Q D R Y Y N S S C S K W A C V P C R V R S
Biological Activity	Cynomolgus IL-23R, His Tag immobilized on CM5 Chip can bind Cynomolgus IL-23 alpha&Mouse IL-12 beta, His Tag with an affinity constant of 2.36 nM as determined in SPR assay (Biacore T200).
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	IL-23 alpha and IL-12 beta, also known as IL23p19 and IL12p40, respectively, and composing IL-23 in a heterodimerization manner, exerts proinflammatory effects and promotes angiogenesis[1][5]. IL-23 belongs to the IL-12 cytokine family together with IL-12 p35/p40, IL-27 EBI3/p28 and IL-35 EBI3/p35, and is produced by various immune cells such as dendritic cells and macrophages upon Toll-like receptor signaling in tissues[3]. IL-23 has a preference expression on memory CD4(+) T cells, and activates the Jak-Stat signaling cascade. IL-23 leads to IL-23 receptor phosphorylation and forms a docking site to trigger phosphorylation signal of STAT3 and STAT4[1]. IL-23 is a key factor perpetuating Th17 cell activation and cytokine production by binding IL-23 receptor to produce Th17 cytokines such as IL17 A, IL-17 F and IL-22[2]. IL-23 also acts function on natural killer cells, results interferon-γ secretion increasing and enhances antibody-dependent cellular cytotoxicity[4]. The sequence of amino acids in IL-23 alpha proteins of cynomolgus shows high similarity with human (97.88%) and is very different from mouse (74.6%) and rat (79.37%) IL-23 facilitates development of inflammation in numerous other models of immune pathology where IL-12 had previously been implicated, including models of arthritis,intestinal inflammation, and psoriasis[6][7][8].

REFERENCES

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