IL-15R alpha & IL-15 Protein, Human (HEK293, His)

Cat. No.:	HY-P77699
Synonyms:	IL-15 R alpha; CD215; IL15RA; IL-15RA; IL-15R-alpha1; Interleukin-15; IL-15; IL15
Species:	Human
Source:	HEK293
Accession:	Q13261 (I31-S108)&P40933 (N49-S162)
Gene ID:	3601&3600
Molecular Weight:	26-28&30-32 kDa

PROPERTIES

AA Sequence	I T C P P P M S V E H A D I W V K S Y S L Y S R E R Y I C N S G F K R K A G T S S L T E C V L N K A T N V A H W T T P S L K C I R D P A L V H Q R P A P P S G G S G G G G S G G G S G G G G S G G N W V N V I S D L K K I E D L I Q S M H I D A T L Y T E S D V H P S C K V T A M K C F L L E L Q V I S L E S G D A S I H D T V E N L I I L A N N S L S S N G N V T E S G C K E C E E L E E K N I K E F L Q S F V H I V Q M F I N T S
Biological Activity	Immobilized Human IL-15RA&IL-15, His Tag at 1 μg/mL (100μL/Well) on the plate. Dose response curve for Human IL-2 R beta&IL-2 R gamma, hFc Tag with the EC_{50} of 0.019-0.11 μg/ml determined by ELISA.
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-15R alpha is expressed on various cell types, including lymphocytes, myeloid cells, nonlymphoid and nonhematopoietic cells[4]. IL-15 is produced in macrophages and dendritic cells[1]. IL-15R alpha is required for transporting of IL-15 from the endoplasmic reticulum to the cell surface to bind with β (CD122)

and γ (CD132) chains on responding lymphocytes[4][5]. When binding with IL-15, the complex increases the in vivo half-life of IL-15 and enhances binding affinity of IL-15 with IL-15Rβ/γ in NK cells and CD8+ T cells. Thus, the signal transmission improves proliferation and antitumor activities of NK cells and CD8+ T cells[2].
IL-15R alpha forms complex with IL-15 and activates the antitumor functions of NK cells and CD8+ T cells. IL-15R alpha/IL-15 complex is a potential immunotherapeutic agent for cancer and viral infection[1].

REFERENCES

[1]. Yin Guo, et al. Immunobiology of the IL-15/IL-15Rα complex as an antitumor and antiviral agent. Cytokine Growth Factor Rev. 2017 Dec;38:10-21.

[2]. Johan Mj Van den Bergh, et al. IL-15 receptor alpha as the magic wand to boost the success of IL-15 antitumor therapies: The upswing of IL-15 transpresentation. Pharmacol Ther. 2017 Feb;170:73-79.

[3]. Spencer W Stonier, et al. Trans-presentation: a novel mechanism regulating IL-15 delivery and responses. Immunol Lett. 2010 Jan 4;127(2):85-92.

[4]. Patrick R Burkett, et al. IL-15R alpha expression on CD8+ T cells is dispensable for T cell memory. Proc Natl Acad Sci U S A. 2003 Apr 15;100(8):4724-9.

[5]. Emanuela Romano, et al. Human Langerhans cells use an IL-15R-α/IL-15/pSTAT5-dependent mechanism to break T-cell tolerance against the self-differentiation tumor antigen WT1. Blood. 2012 May 31;119(22):5182-90.

[6]. Isvoranu G, et al. Immunotherapy in cancer-in vivo study of the anti-tumor activity of the IL-15/IL-15R alfa combination in an experimental model of melanoma[J]. Farmacia, 2015, 63: 631-636.

[7]. Thomas A. Stoklasek, et al. Combined IL-15/IL-15Rα Immunotherapy Maximizes IL-15 Activity In Vivo. J Immunol November 1, 2006, 177 (9) 6072-6080;

Caution: Product has not been fully validated for medical applications. For research use only.

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