Data Sheet (Cat.No.TMPY-01018)

TargetMol

IL-13RA2 Protein, Mouse, Recombinant (His & hFc)

General Information

Synonyms:	interleukin 13 receptor, alpha 2;CD213a2;interleukin 13 receptor, α2
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Lys 334) of mouse IL13Rα2 (NP_032382.1) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 22
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	O88786-1
Molecular Weight:	64.5 kDa (predicted); 75-80 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Immobilized human IL13 at 20 μg/ml (100 μl/well) can bind mouse IL13RA2 with a linear range of 0.5-2 μg/ml. 2. Measured by its ability to inhibit IL13-dependent proliferation of TF1 human erythroleukemic cells. The ED50 for this effect is typically 5-30 ng/ml.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin-13 receptor subunit alpha-2 (IL13RA2/IL-13RA2) is also known as cluster of differentiation 213A2 (CD213A2), IL-13 receptor subunit alpha-2, IL-13R subunit alpha-2, and IL-13RA2. The IL13RA2 is often

overexpressed in brain tumors, making Il13ra2 one of the vaccine targets for immunotherapy of glioma. IL13RA2/IL-13RA2 is a cancer-associated receptor that is present in greater than 80% of High-Grade Astrocytomas (HGA) and has recently been recognized as a cytokine that predisposes breast cancer cells to metastasize. Expression of IL13Rα2 was rapidly lost from the surface of transduced cells grown in culture. The loss appeared to be related to ligands present in fetal bovine serum in the medium. None of the malignant glioma cell lines cultivated in vitro and tested to date exhibited the IL13Rα2 receptor. A recombinant virus (R5111) enters cells via its interaction with the IL13Rα2 receptor in a manner that cannot be differentiated from the interaction of wild-type virus with its receptors.

Reference

Zhou G,et al.. (2005) Characterization of a recombinant herpes simplex virus 1 designed to enter cells via the IL13Ralpha2 receptor of malignant glioma cells. J Virol. 79(9): 5272-7.

Osawa M,et al.. (2000) Characterization of the mouse interleukin-13 receptor alpha1 gene. Immunogenetics. 51 (11): 974-81.

Nair BG,et al.. (2011) Nanotechnology platforms; an innovative approach to brain tumor therapy. Med Chem. 7(5): 488-503.

Benson M,et al.. (2006) A network-based analysis of the late-phase reaction of the skin. J Allergy Clin Immunol. 118 (1): 220-5.

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