Data Sheet (Cat.No.TMPY-03204)

TargetMol

IL-25/IL17E Protein, Rat, Recombinant (hFc)

General Information

Synonyms: interleukin 25

Protein Construction: A DNA sequence encoding the rat IL25 (D3ZLB1) (Val17-Ala169) was expressed, fused with Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu

Species: Rat

Expression Host: HEK293 Cells

Accession: D3ZLB1

Molecular Weight: 46.1 kDa (predicted); 49 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Measured by its binding ability in a functional ELISA. Immobilized mouse IL17BR-His at 10 μg/mL (100 μl/well) can bind rat Fc-IL25 . The EC50 of rat Fc-IL25 is 0.12-0.27 μg/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-25 (IL-25) is a cytokine that shares sequence similarity with interleukin 17. This cytokine can induce NF-kappaB activation, and stimulate the production of interleukin 8. Both this cytokine and interleukin 17B are ligands for the cytokine receptor IL17BR. IL-25 is a member of the IL-17 family of cytokines. However, unlike the other members of this family, IL-25 promotes T helper (Th) 2 responses. IL-25 also regulates the development of autoimmune inflammation mediated by IL-17-producing T cells. IL-25 and IL-17, being members of the same

cytokine family, play opposing roles in the pathogenesis of organ-specific autoimmunity. IL-25 promotes cell expansion and Th2 cytokine production when Th2 central memory cells are stimulated with thymic stromal lymphopoietin (TSLP)–activated dendritic cells (DCs), homeostatic cytokines, or T cell receptor for antigen triggering. Elevated expression of IL-25 and IL-25R transcripts was observed in asthmatic lung tissues and atopic dermatitis skin lesions, linking their possible roles with exacerbated allergic disorders. A plausible explanation that IL-25 produced by innate effector eosinophils and basophils may augment the allergic inflammation by enhancing the maintenance and functions of adaptive Th2 memory cells had been provided.

Reference

Rickel EA,et al.. (2008) Identification of functional roles for both IL-17RB and IL-17RA in mediating IL-25-induced activities. J Immunol. 181(6): 4299-310.

Tamachi T,et al.. (2006) IL-25 enhances allergic airway inflammation by amplifying a TH2 cell-dependent pathway in mice. J Allergy Clin Immunol. 118(3): 606-14.

Kleinschek MA,et al.. (2007) IL-25 regulates Th17 function in autoimmune inflammation. J Exp Med. 204(1): 161-70.

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