

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived mouse IL-5 R alpha/CD125 protein Asp18-His339, with a C-terminal 6-His tag Accession # P21183.1
N-terminal Sequence Analysis	Asp18
Predicted Molecular Mass	38 kDa

SPECIFICATIONS

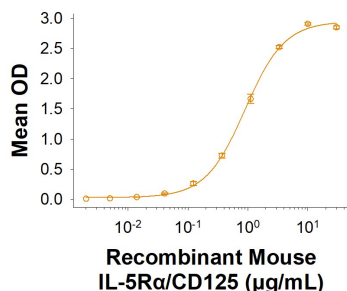
SDS-PAGE	48-54 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse IL-5 (Catalog # 405-ML) is immobilized at 4.0 μ g/mL (100 μ L/well), Recombinant Mouse IL-5R α /CD125 His-tag (Catalog # 11367-5R) binds with an ED ₅₀ of 0.250-2.50 μ g/mL
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 μ g/mL in PBS.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

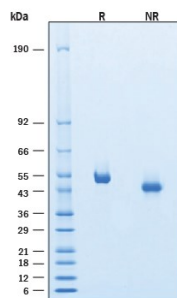
DATA

Binding Activity



Recombinant Mouse IL-5 R α /CD125 His-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. When Recombinant Mouse IL-5 (Catalog # 405-ML) is immobilized at 4.0 μ g/mL (100 μ L/well), Recombinant Mouse IL-5R α /CD125 His-tag Protein (Catalog # 11367-5R) binds with an ED₅₀ of 0.250-2.50 μ g/mL

SDS-PAGE



Recombinant Mouse IL-5 R α /CD125 His-tag Protein SDS-PAGE. 2 μ g/lane of Recombinant Mouse IL-5 R α /CD125 His-tag Protein (Catalog # 11367-5R) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 48-54 kDa.

BACKGROUND

Interleukin-5 Receptor alpha (IL-5 R α), also known as CD125, is a 60 kDa hematopoietin receptor that plays a dominant role in eosinophil biology (1-3). Mature human IL-5 R α consists of a 322 amino acid (aa) extracellular domain (ECD) with a WSxWS motif and a four cysteine motif, a 20 aa transmembrane segment, and a 58 aa cytoplasmic domain (4, 5). Within the ECD, mouse IL-5 R α shares 71% and 86% aa sequence identity with human and rat IL-5 R α , respectively. Alternate splicing of human IL-5 R α generates soluble secreted forms which function as IL-5 antagonists (5-7). The high affinity receptor for IL-5 is a complex that consists of the ligand binding IL-5 R α and the transmembrane common β chain (β c/CD131) which is shared with the receptor complexes for IL-3 and GM-CSF (4). IL-5 R α binds IL-5 at low affinity and then associates with preformed β c oligomers to form the signaling-competent receptor complex (8). IL-5 stimulation of CD34+ hematopoietic progenitor cells induces the up-regulation of transmembrane IL-5 R α followed by eosinophilic differentiation and activation (9 - 11). IL-5 R α also promotes the differentiation of basophils and B cells (12, 13). Exposure of mature eosinophils to IL-5 attenuates their IL-5 responsiveness by inducing the down-regulation of surface IL-5 R α and increased production of soluble IL-5 R α (14, 15). Elevated production of IL-5 at sites of allergic inflammation induces eosinophilia and exacerbation of immune cell infiltration, tissue damage, and remodeling (2, 3).

References:

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