Sterile

#11996

Mouse $_{His6}$Interleukin-25/IL-17E (m_{His6}IL-25)

Cell Signaling TECHNOLOGY®

- ☐ SC 10 µg (With Carrier)
- ☐ SF 10 µg (Carrier Free)
- ☐ LC 50 µg (With Carrier)
- ☐ LF 50 µg (Carrier Free)

Multi-milligram quantities available

New 03/13

Orders ■ 877-616-CELL (2355) orders@cellsignal.com

Support ■ 877-678-TECH (8324) info@cellsignal.com

Web ■ www.cellsignal.com

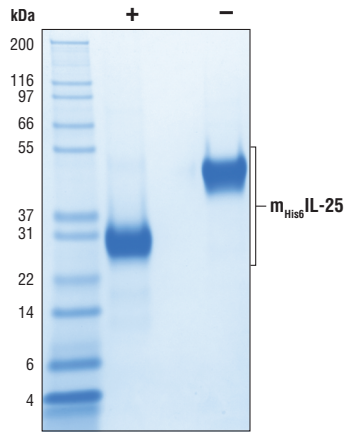
For Research Use Only. Not For Use In Diagnostic Procedures.

Source: Recombinant mouse $_{His6}$IL-25 (m_{His6}IL-25) Val17-Ala169 (Accession #NP_542767) was expressed in human 293 cells at Cell Signaling Technology.

Molecular Characterization: Recombinant N-terminally His6-tagged mIL-25 has a calculated MW of 20,051 Da. The reduced protein migrates as a 24-31 kDa polypeptide. The nonreduced cystine-linked homodimer migrates as a 46-50 kDa protein. Reduced mobility and heterogeneity in SDS-PAGE are due to glycosylation. The expected amino terminus of recombinant m_{His6}IL-25 was verified by amino acid sequencing.

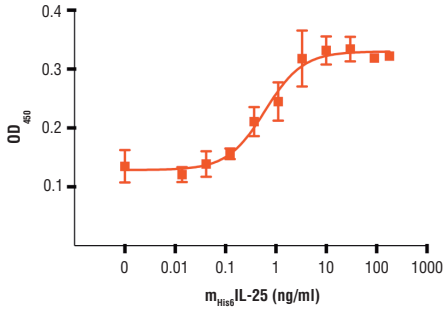
Endotoxin: Less than 0.01 ng endotoxin/1 µg m_{His6}IL-25.

Purity: >97% as determined by SDS-PAGE of 6 µg reduced (+) and nonreduced (-) recombinant m_{His6}IL-25. All lots are greater than 97% pure.

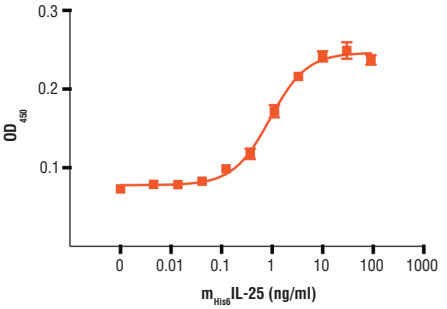


The purity of recombinant m_{His6}IL-25 was determined by SDS-PAGE of 6 µg reduced (+) and nonreduced (-) recombinant m_{His6}IL-25 and staining overnight with Coomassie Blue.

Bioactivity: The bioactivity of recombinant m_{His6}IL-25 was determined in mouse splenocyte and HT-29 cell cytokine secretion assays. The ED_{50} of each lot is between 0.5-1.5 ng/ml in mouse splenocyte cells and 0.25-1.5 ng/mL in HT-29 cells.



IL-13 production from mouse splenocytes cultured with m_{His6}IL-25 was assessed. Mouse splenoyctes were treated with increasing concentrations of m_{His6}IL-25 for 72 hr. Cell supernatants were then harvested and assayed for IL-13 by ELISA, and the OD_{450} was determined.



GRO α production from HT-29 cells cultured with m_{His6}IL-25 was assessed. HT-29 cells were treated with increasing concentrations of m_{His6}IL-25 for 24 hr. Cell supernatants were then harvested and assayed for GRO α by ELISA, and the OD_{450} was determined.

Formulation: With carrier: Lyophilized from a 0.22 µm filtered solution of m_{His6}IL-25 in 20 mM Tris, pH 7.2 containing 20 µg BSA per 1 µg m_{His6}IL-25.

Carrier free: Lyophilized from a 0.22 µm filtered solution of m_{His6}IL-25 in 20 mM Tris, pH 7.2.

Reconstitution:
With carrier: Add sterile 20 mM Tris, pH 7.2 or 20 mM Tris, pH 7.2 containing 1% bovine or human serum albumin or 5-10% FBS to a final m_{His6}IL-25 concentration of greater than 50 µg/ml. Solubilize for 30 minutes at room temperature with occasional gentle vortexing.

Carrier free: Add sterile 20 mM Tris, pH 7.2 or 20 mM Tris, pH 7.2 containing protein to minimize absorption of m_{His6}IL-25 to surfaces. Solubilize for 30 minutes at room temperature with occasional gentle vortexing. Stock m_{His6}IL-25 should be greater than 50 µg/ml.

Storage: Stable in lyophilized state at 4°C for 1 year after receipt. Sterile stock solutions reconstituted with carrier protein are stable at 4°C for 2 months and at -20°C for 6 months. Avoid repeated freeze-thaw cycles.

Maintain sterility. Storage at -20°C should be in a manual defrost freezer.

Applications: Optimal concentration for the desired application should be determined by the user.

Background: IL-25, also known as IL-17E, is a member of the IL-17 superfamily of cytokines. IL-25 is expressed in epithelial cells, $CD4^+$ T cells, mast cells, and eosinophils (1). Many cell types are responsive to IL-25, including T cells, macrophages, and epithelial cells (1). The receptor for IL-25 consists of a heterodimer of IL-17RA and IL-17RB (1,2). IL-25 promotes Th2 type immune responses by induction of IL-5, IL-4, and IL-13 and may contribute to allergic inflammation and asthma (1-3). IL-25 has also been shown in research to promote Th9 cell activation and induce apoptosis in breast cancer cells (4,5).

Background References:

(1) Iwakura, Y. et al. (2011) *Immunity* 34, 149-62.

(2) Rickel, E.A. et al. (2008) *J Immunol* 181, 4299-310.

(3) Petersen, B.C. et al. (2012) *Nat Med* 18, 751-8.

(4) Angkasekwinai, P. et al. (2010) *Nat Immunol* 11, 250-6.

(5) Furuta, S. et al. (2011) *Sci Transl Med* 3, 78ra31.