

IL-17F Protein, Mouse (133a.a, HEK293, His)

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| Cat. No.: | HY-P72584 |
| Synonyms: | Interleukin-17F; IL-17F; Cytokine ML-1; Interleukin-24; IL-24; IL17F; IL24 |
| Species: | Mouse |
| Source: | HEK293 |
| Accession: | Q7TNI7 (R29-A161) |
| Gene ID: | 257630 |
| Molecular Weight: | 17-23 kDa |

PROPERTIES

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| AA Sequence | <p>R K N P K A G V P A L Q K A G N C P P L E D N T V R V D I R I F N Q N Q G I S V</p> <p>P R E F Q N R S S S P W D Y N I T R D P H R F P S E I A E A Q C R H S G C I N A</p> <p>Q G Q E D S T M N S V A I Q Q E I L V L R R E P Q G C S N S F R L E K M L L K V</p> <p>G C T C V K P I V H Q A A</p> |
| Appearance | Lyophilized powder. |
| Formulation | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. |
| Endotoxin Level | <1 EU/µg, determined by LAL method. |
| Reconstitution | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). |
| 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

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| Background | <p>Interleukin-17F (IL-17F) belongs to the IL-17 cytokine family. IL-17F is expressed in activated CD4 T cells, activated monocytes, basophils and mast cells. IL-17F can be produced by differentiated TH17 cells, lamina propria T cells, memory CD4⁺ T cells, γδ T cells and NKT cells^[1].</p> <p>The mouse IL-17F shares 55.90% amino acid sequence identity with human and 86.34% identity with rat.</p> <p>IL-17F is an inflammatory cytokine that induces many proinflammatory cytokines and chemokines, including TGF-β, IL-2, ICAM1, GM-CSF, CCL2, CCL7, TSLP, MMP13, IL-6 and CXCL1. IL-17F also induces antimicrobial peptides including hBD-2, S100A7, S100A8 and S100A9 with IL-22 and can synergize with IL-23 in human eosinophils to promote the production of IL-1 β and IL-6. IL-17F is a homodimeric cytokine. IL-17F shares the most similarities with IL-17A (50% homology) and can be</p> |
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produced as an IL-17AF heterodimer. IL-17A, IL-17F and IL-17A/F use the same receptor complex: IL-17RA and IL-17RC heterodimer. They trigger qualitatively similar signaling pathways, and IL-17F exhibits the lowest biological activity. IL-17F shows about 100–1000 times lower affinity to the IL-17RA subunit than IL-17A, and does not compete with IL-17A binding to IL-17RA^{[1][2]}.

IL-17F plays a protective role in colon cancer development and can be used for the research of autoimmune diseases, infection and cancer^{[1][3][4]}.

REFERENCES

- [1]. Chang SH, et al. IL-17F: regulation, signaling and function in inflammation. *Cytokine*. 2009 Apr;46(1):7-11.
 - [2]. McGeachy MJ, et al. The IL-17 Family of Cytokines in Health and Disease. *Immunity*. 2019 Apr 16;50(4):892-906.
 - [3]. Ferreira N, et al. IL-17A and IL-17F orchestrate macrophages to promote lung cancer. *Cell Oncol (Dordr)*. 2020 Aug;43(4):643-654.
 - [4]. Tong Z, et al. A protective role by interleukin-17F in colon tumorigenesis. *PLoS One*. 2012;7(4):e34959.
 - [5]. Yang XO, et al. Regulation of inflammatory responses by IL-17F. *J Exp Med*. 2008 May 12;205(5):1063-75.
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Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA