

IL-17F Protein, Human

Cat. No.:	HY-P7209
Synonyms:	rHuIL-17F; Cytokine ML-1
Species:	Human
Source:	E. coli
Accession:	Q96PD4 (R31-Q163)
Gene ID:	112744
Molecular Weight:	15-32 kDa

PROPERTIES

AA Sequence	<p>R K I P K V G H T F F Q K P E S C P P V P G G S M K L D I G I I N E N Q R V S M</p> <p>S R N I E S R S T S P W N Y T V T W D P N R Y P S E V V Q A Q C R N L G C I N A</p> <p>Q G K E D I S M N S V P I Q Q E T L V V R R K H Q G C S V S F Q L E K V L V T V</p> <p>G C T C V T P V I H H V Q</p>
Biological Activity	The ED ₅₀ is <40 ng/mL as measured by murine NIH/3T3 cells, corresponding to a specific activity of >5.0 × 10 ⁴ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS, pH 7.2, with trehalose or 20 mM PB, 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 4 mM HCl. 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. 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

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 human IL-17F shares 55.90% amino acid sequence identity with mouse and 57.14% 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,</p>
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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 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

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