

## IL-17F Protein, Rat (sf9, His)

<b>Cat. No.:</b>	HY-P74829
<b>Synonyms:</b>	Cytokine ML-1; IL17F; Interleukin-17F
<b>Species:</b>	Rat
<b>Source:</b>	Sf9 insect cells
<b>Accession:</b>	Q5BJ95 (A28-A161)
<b>Gene ID:</b>	301291
<b>Molecular Weight:</b>	Approximately 16.4 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> A R R N P K V G L S   A L Q K A G N C P P   L E D N S V R V D I   R I F N Q N Q G I S V P R D F Q N R S S   S P W D Y N I T R D   P D R F P S E I A E   A Q C R H S G C I N A Q G Q E D G S M N   S V P 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 I K V G C T C V T P I V   H H A A </pre>
<b>Biological Activity</b>	<ol style="list-style-type: none"> <li>Measured by its binding ability in a functional ELISA.</li> <li>Immobilized rat IL17F-His at 10 µg/mL (100 µL/well) can bind Rat IL17RA-Fc3. The EC<sub>50</sub> of Rat IL17RA-Fc3 is 0.28-0.66 µg/mL.</li> </ol>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<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<sup>+</sup> T cells, γδ T cells and NKT cells<sup>[1]</sup>.</p> <p>The rat IL-17F shares 57.14% amino acid sequence identity with human and 86.34% identity with mouse.</p>
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IL-17F is an inflammatory cytokine that induces many proinflammatory cytokines and chemokines, including TGF- $\beta$ , 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  $\beta$  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<sup>[1][2]</sup>.

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

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## REFERENCES

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