Recombinant Human IL-17C

Catalog Number: 1234-IL/CF

DESCRIPTION

Source	*E. coli*-derived His19-Val197, with an N-terminal Met Accession # Q9P0M4.1
N-terminal Sequence Analysis	Met
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	19.8 kDa (monomer)

SPECIFICATIONS

Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human IL-17 RE Fc Chimera (Catalog # 8358-MR) is immobilized at 0.25 µg/mL (100 µL/well), the concentration of Recombinant Human IL-17C that produces 50% of the optimal binding response is 1.5-7.5 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 4 mM HCl.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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.

BACKGROUND

Interleukin-17C (IL-17C) is a 15-20 kDa glycosylated cytokine that plays an important role in mucosal immunity and chronic inflammation. The six IL-17 cytokines (IL-17A-F) are encoded by separate genes but adopt a conserved cystine knot fold (1, 2). Mature human IL-17C shares 79% and 76% amino acid sequence identity with mouse and rat IL-17C, respectively (3). IL-17C binds to IL-17 RE with high affinity and to IL-17 RA with low affinity (4, 5). These two receptor chains can associate into a heterodimeric receptor for IL-17C (4-6). IL-17 RE is expressed on keratinocytes, mucosal epithelial cells, Th17 cells, and γ/δ T cells, while IL-17 RA is widely expressed (4, 5). IL-17 RE is required for mediating the pro-inflammatory and homeostatic actions of IL-17C in the skin and mucosa (1, 2). IL-17C expression is induced by inflammatory stimulation in colon and airway epithelial cells, keratinocytes, $CD4^+$ T cells, macrophages, and dendritic cells (4, 6-9). It is up-regulated in various chronic inflammatory diseases including psoriasis, cystic fibrosis, and chronic obstructive pulmonary disease (COPD) (7, 8, 10). IL-17 RE is reciprocally down-regulated in psoriatic lesions (10). The interaction of IL-17C with IL-17 RE promotes mucosal immunity through the induction of anti-bacterial peptides and pro-inflammatory cytokines and chemokines (4, 6, 8, 9). IL-17C action supports the integrity of the colon epithelium following infection induced damage (4, 6, 11) but also contributes to psoriatic skin thickening and the progression of arthritis (4, 8, 9). IL-17C is additionally up-regulated in Th17 cell dependent autoimmunity (5). In this setting, it exacerbates disease severity by inducing Th17 cell production of IL-17A, IL-17F, IL-22, CCR6, and CCL20 (5).

References:

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449