



## Recombinant Monkey IL-6

Catalog Number: GR175007

### Background

IL-6 is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine and is produced by T cells, macrophages, fibroblasts, osteoblasts, endothelial and other cells (1,2,3). IL-6 induces proliferation and differentiation and acts on B cells, T cells, thymocytes, and others. IL-6 is one of the most important mediators of fever and of the acute phase response. In the muscle and fatty tissue, IL-6 stimulates energy mobilization that leads to increased body temperature. IL-6 can be secreted by macrophages in response to specific microbial molecules, referred to as pathogen associated molecular patterns (PAMPS). IL-6 in concert with TGF $\beta$  is important for developing Th17 responses. IL-6 binds to IL-6R $\alpha$  that through association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/STAT cascade and the SHP2/Erk Map kinase cascade (1,4,5). IL-6 also forms a complex with an IL-6R $\alpha$  splice variant that is non-membrane associated (4). The IL-6/soluble IL-6R $\alpha$  complex can then activate the gp130 signaling pathway on cells that express gp130 but not IL6R $\alpha$  (4). IL-6 is relevant to many disease processes such as diabetes (6), atherosclerosis (7), depression (8), Alzheimer's Disease (9), systemic lupus erythematosus (10), prostate cancer (11), breast cancer (12), and rheumatoid arthritis (13).

### References

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6. Kristiansen OP and Mandrup-Poulsen T (2005). *Diabetes* 54 Suppl 2: S114–24.
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Catalog Number: GRC175007

### Description

Sources: expressed in *E. coli*.

Composition: Val21-Met212

Accession #: NP\_001036198.2

Molecular weight: 21 kDa

Activity: Measured in a cell proliferation assay using T1165.85.2.1 mouse plasmacytoma cells. Nordan RP et al. (1987) J Immunol 139:813.

The ED50 for this effect is typically 0.6 ng/ml.

Endotoxin level: <1.0 EU per 1 µg of the protein by the LAL method.

Purity: > 96%, by SDS-PAGE under reducing conditions and visualized by silver staining.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein.

Reconstitution: reconstitute at 50-500 µg/ml in sterile PBS and store at -20°C ~ -70°C for up to 3 months.

Shipping and storage: The product is shipped at ambient temperature or with ice pad. Upon receipt, store it immediately at -20°C to avoid loss of activity and use it in 12 months.

### Amino acid sequence with 6 his tags at N-terminal

HHHHHHVLPAAFPAPVLPGEDSKDVAAPHSQPLTSSERIDKHIRYILDGISALRKETCNRSNMCESSKEALAENNLN  
LPKMAEKDGCQSGFNEDTCLVKIITGLLEFEVYLEYLQNRFESEEQARAVQMSTKVLIQFLQKKAKNLDAITTPPE  
PTTNASLLTKLQAQNQWLQDMTTHLILRSFKEFLQSSLRALRQM

### DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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