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# IL-6

Catalog # PVGS1407

## Product Information

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| **Primary Accession** | P08505 |
| **Species** | Mouse |
| **Sequence** | Phe25-Thr211 |
| **Purity** | > 95% as analyzed by SDS-PAGE |
| **Endotoxin Level** | |
| **Biological Activity** | $ED_{50}$ |
| **Expression System** | CHO |
| **Formulation** | Lyophilized after extensive dialysis against PBS. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in $ddH_2O$ or PBS up to 100 g/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 16193 |
| **Other Names** | Interleukin-6, IL-6, B-cell hybridoma growth factor, Interleukin HP-1, Il6 {ECO:0000312\|MGI:MGI:96559}, Il-6 |
| **Target Background** | Interleukin-6 (IL-6), also known as BSF-2, CDF and IFNB2, is a pleiotropic cytokine that participates in both pro-inflammatory and anti-inflammatory responses. It is produced mainly by T cells, macrophages, monocytes, endothelial cells and muscle cells. IL-6 binds to IL-6 receptor (IL-6R) to trigger the association of IL-6R with gp130, inducing signal transduction through JAKs and STATs. The biological functions of IL-6 are diverse. It stimulates B cell differentiation and antibody production, myeloma and plasmacytoma growth, and nerve cell differentiation. It also acts as a myokine, produced by muscle cells in response to muscle contraction and released into the blood stream to help break down fats and improve insulin resistance. |

## Protein Information

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| **Name** | Il6 {ECO:0000312\|MGI:MGI:96559} |
| **Synonyms** | Il-6 |
| **Function** | Cytokine with a wide variety of biological functions in immunity, tissue regeneration, and metabolism (Probable). Binds to IL6R, then the complex associates to the signaling subunit IL6ST/gp130 to trigger the intracellular IL6-signaling pathway (PubMed:8910279). The interaction with the membrane-bound IL6R and IL6ST stimulates 'classic signaling', whereas the binding of IL6 and soluble IL6R to IL6ST stimulates 'trans-signaling'. Alternatively, 'cluster signaling' occurs when membrane-bound IL6:IL6R complexes on transmitter cells activate IL6ST receptors on neighboring receiver cells (PubMed:27893700). |
| **Cellular Location** | Secreted. |
| **Tissue Location** | Expressed by dendritic cells and macrophages (PubMed:23045607, PubMed:27893700). Expressed by activated follicular B cells (PubMed:23045607). Abundantly expressed in the central nervous system (CNS), particularly the hypothalamic region (PubMed:28402851) |