

PRODUCT INFORMATION



IL-6 (human, recombinant)

Item No. 30174

Overview and Properties

Synonyms: B Cell Stimulatory Factor 2, BSF-2, CDF, CTL Differentiation Factor, HGF, HSF, Hybridoma Growth Factor, IFN- β -2, Interferon β -2, Interleukin-6

Source: Active recombinant N-terminal His-tagged IL-6 expressed in Expi293F cells

Amino Acids: 30-212

Uniprot No.: P05231

Molecular Weight: 20.9 kDa

Storage: -80°C (as supplied)

Stability: \geq 6 months

Purity: *batch specific* (\geq 85% estimated by SDS-PAGE)

Supplied in: 50 mM HEPES, pH 8.0, with 150 mM sodium chloride, 10% glycerol, and 2 mM 2-mercaptoethanol

Protein

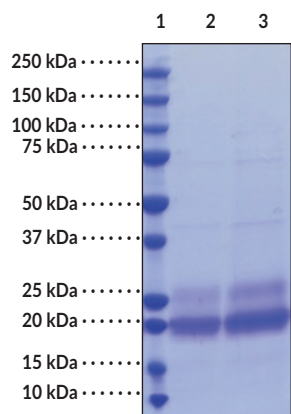
Concentration: *batch specific* mg/ml

Activity: IL-6 activation of STAT3 in HepG2 cells as measured by STAT3 Rapid Transcription Factor Assay Kit.

Specific Activity: *batch specific* U/mg

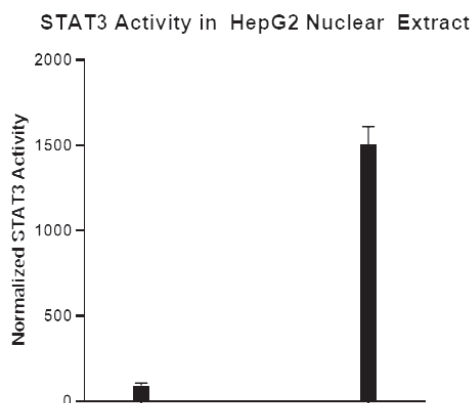
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: IL-6 (2 μ g)
Lane 3: IL-6 (4 μ g)

Representative gel image shown; actual purity may vary between each batch.



WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

IL-6 is a cytokine with roles in both the initiation and resolution of inflammatory responses.^{1,2} IL-6 is produced in response to an inflammatory event, induces recruitment of neutrophils to the site of inflammation, and signals through the membrane-bound IL-6 receptor (IL-6R) to upregulate the synthesis of acute phase proteins, lipolysis in the liver, and induced differentiation of T and B cells. Following initiation of this classical signaling pathway, a soluble form of IL-6R (sIL-6R) is released from neutrophils to promote recruitment of monocytes and macrophages, induction of fever *via* IL-6 action in the hypothalamus, and production of anti-inflammatory M2 macrophages to initiate tissue repair. Production of IL-6 is dysregulated in various chronic inflammatory diseases, including rheumatoid arthritis, Castleman disease, polymyalgia rheumatica, and giant cell arteritis.³ It also induces tumor growth and metastasis *via* activation of JAK/STAT signaling.⁴ Cayman's IL-6 (human, recombinant) protein can be used for ELISA, Western blot, and cell-based assay applications. Post-translational modifications such as glycosylation may retard receptor electrophoretic migration such that the protein signal may be detected between 20 and 26 kDa.

References

1. Del Giudice, M. and Gangestad, S.W. Rethinking IL-6 and CRP: Why they are more than inflammatory biomarkers, and why it matters. *Brain Behav. Immun.* **70**, 61-75 (2018).
2. Rose-John, S. Interleukin-6 family cytokines. *Cold Spring Harb. Perspect. Biol.* **10(2)**, (2018).
3. Schett, G. Physiological effects of modulating the interleukin-6 axis. *Rheumatology (Oxford)* **57(suppl_2)**, ii43-ii50 (2018).
4. Lacina, L., Brábek, J., Král, V., *et al.* Interleukin-6: A molecule with complex biological impact in cancer. *Histol. Histopathol.* **34(2)**, 125-136 (2019).

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