

## Product Information

### Monoclonal Anti-Interleukin-6, clone 6708.11

produced in mouse, purified immunoglobulin

Catalog Number **I7901**

#### Synonym: Anti-IL-6

#### Product Description

Monoclonal Anti-Interleukin-6 (IgG1 isotype) is purified from a mouse hybridoma. Recombinant, human IL-6 (rhIL-6) expressed in *E. coli* was used as immunogen. The antibody is purified by Protein A affinity chromatography.

Monoclonal Anti-IL-6 will neutralize the biological activity of rhIL-6. The antibody may also be used in immunoblotting and ELISA. By immunoblotting, the antibody shows no cross-reactivity with rmlIL-6, rhIL-6 sR, rhOSM, rhLIF, rhIL-11, rhsgp130 and rhCNTF.

Interleukin 6 (IL-6) is a multifunctional 26 kDa protein originally discovered in the medium of RNA-stimulated fibroblastoid cells.<sup>1</sup> Interleukin-6 appears to be directly involved in the responses that occur after infection and cellular injury, and it may prove to be as important as IL-1 and TNF- $\alpha$  in regulating the acute phase response.<sup>2,3</sup> IL-6 is reported to be produced by fibroblasts, activated T cells, activated monocytes or macrophages and endothelial cells. It acts upon a variety of cells including fibroblasts, myeloid progenitor cells, T cells, B cells and hepatocytes.<sup>3</sup> Interleukin-6 induces multiple effects as indicated by its numerous synonyms: plasmacytoma growth factor (PCT-GF), interferon- $\beta$ -2 (IFN- $\beta$ 2), monocyte derived human B cell growth factor, B cell stimulating factor (BSF-2), hepatocyte stimulating factor (HSF), and interleukin hybridoma/plasmacytoma-1 (IL-HP1). In addition, IL-6 appears to interact with IL-2 in the proliferation of T lymphocytes.<sup>4</sup> IL-6 potentiates the proliferative effect of IL-3 on multipotential hematopoietic progenitors.<sup>5</sup>

#### Reagent

Lyophilized from PBS without additives.

#### Reconstitution

To one vial of lyophilized powder, add 1 ml of 0.2  $\mu$ m-filtered PBS to produce a 0.5 mg/ml stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

Store at -20 °C.

Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing.

#### Product Profile

Anti-IL-6 is tested for its ability to neutralize the biological activity of rhIL-6 on the IL-6 dependent murine plasmacytoma cell line T1165.85.2.1.<sup>6</sup> The ND<sub>50</sub> of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rhIL-6 which is present at a concentration just high enough to elicit a maximum response. In this bioassay, rhIL-6 is incubated with various dilutions of the antibody for 1 hour at 37 °C in a 96-well microtiter plate. After the incubation, T1165.85.2.1 cells are added to the antigen-antibody mixture. The assay mixture, which contained a total volume of 0.2 ml with rhIL-6 at 2.5 ng/ml, is incubated at 37 °C for 48 hours in a humidified CO<sub>2</sub> incubator. Cell proliferation is measured with MTT.

#### Results

Bioactivity: ND<sub>50</sub> = 0.05-0.15  $\mu$ g/ml  
Capture ELISA: 2-8  $\mu$ g/ml capture antibody detects 0.6 pg/ml of rhIL-6.

#### Indirect

Immunoblotting: 1-2  $\mu$ g/ml antibody detects rhIL-6 at 20 ng/lane under non-reducing and reducing conditions.

#### References

1. Billiau, A., *Immunol. Today*, **8**, 84 (1987).
2. Gauldie, J., et al., *Proc. Natl. Acad. Sci. USA*, **84**, 7251 (1987).

3. Van Snick, J., *Annu., Rev. Immunol.*, **8**, 253 (1990).
4. Nordan, R. P., et al., *J. Immunol.*, **139**, 813 (1987).
5. Van Snick, J., et al., *Proc. Nat. Acad. Sci. USA*, **83**, 9679 (1986).
6. Nordan, R. P., and Potter, M., *Science*, **233**, 566 (1986).

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