

## Product Information

### Interleukin-10 from mouse

recombinant, expressed in *Escherichia coli*  
cell culture tested

Catalog Number **I3019**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

Synonym: IL-10

### Product Description

Interleukin-10 (IL-10) is produced from a DNA sequence encoding the mature mouse IL-10 protein<sup>1</sup> expressed in *Escherichia coli*. Recombinant mouse IL-10 (160 amino acids) has a predicted molecular mass of ~18 kDa.

IL-10, originally designated as cytokine synthesis inhibitory factor (CSIF), was identified as a product of mouse T helper 2 (Th2) clones that inhibited cytokine production by Th1 clones and is dependent upon stimulation with antigen in the presence of antigen presenting cells (APC). Human and mouse IL-10 show 81% and 73% homology at the nucleotide and amino acid level, respectively. However, while mouse IL-10 has species-specific activity, human IL-10 acts on both human and mouse target cells.<sup>2</sup>

Mouse IL-10 is a pleiotropic cytokine, which exerts either immunostimulatory or immunosuppressive effects on a number of cell types. Mouse IL-10 is produced by Th2 cells, activated fetal thymocytes, macrophages, mast cell lines, keratinocytes, and LY-1<sup>+</sup> (CD5<sup>+</sup>) and normal B cells.<sup>3</sup> IL-10 will stimulate the growth of stem cells, mast cells, and thymocytes.<sup>3</sup> IL-10 enhances cytotoxic T cell development,<sup>4</sup> and co-stimulates B cell differentiation and immunoglobulin secretion.<sup>5</sup> IL-10 inhibits cytokine production by macrophages<sup>3</sup> and suppresses macrophage class II MHC expression.<sup>6</sup> The mouse IL-10 gene is on mouse chromosome 1.<sup>7</sup>

This product is lyophilized from a 0.2  $\mu\text{m}$  filtered solution in PBS, pH 7.4, with 50  $\mu\text{g}$  bovine serum albumin per 1  $\mu\text{g}$  as a carrier protein.

Purity: >97% (SDS-PAGE)

Endotoxin level: <1.0 EU per 1  $\mu\text{g}$  of cytokine  
[LAL (Limulus amoebocyte lysate) method]

The biological activity of recombinant mouse IL-10 is determined in a cell proliferation assay using MC/9-2 cells, a mouse mast cell line.<sup>8</sup> The ED<sub>50</sub> for this effect can be found on the Certificate of Analysis.

The ED<sub>50</sub> is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

### Precautions and Disclaimer

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

### Preparation Instructions

Prepare a stock solution of  $\geq 100\text{ }\mu\text{g/mL}$  with sterile PBS containing  $\geq 0.1\%$  human or bovine serum albumin.

### Storage/Stability

Store the product at  $-20\text{ }^{\circ}\text{C}$ . Under aseptic conditions, the product may be stored at  $2-8\text{ }^{\circ}\text{C}$  for a maximum of 1 month. For extended storage, freeze in working aliquots at  $-20\text{ }^{\circ}\text{C}$  or below. Repeated freezing and thawing is not recommended.

### References

1. Moore, K. et al., *Science*, **248**, 1230 (1990).
2. Vieira, P. et al., *Proc. Natl. Acad. Sci. USA*, **88**, 1172 (1991).
3. Rennick, D. et al., *Progress in Growth Factor Research*, **4**, 207 (1992).
4. Chen, W. et al., *J. Immunol.*, **147**, 528 (1991).
5. Rousset, F. et al., *Proc. Natl. Acad. Sci. USA*, **89**, 1890 (1992).
6. de Waal-Malefyt, R. et al., *J. Exp. Med.*, **174**, 915 (1991).
7. Kim, J. et al., *J. Immunol.*, **148**, 3618 (1992).
8. Thompson-Snipes, L. et al., *J. Exp. Med.*, **173**, 507 (1991).

PCG,BG,CS,TD,KAA,PHC,MAM 05/18-1