

Product Information

CRG-2 from mouse recombinant, expressed in *E. coli*

Catalog Number **C8490**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: Cytokine Responsive Gene 2, IP-10, CXCL10

Product Description

Recombinant Mouse CRG-2 is produced from a DNA sequence encoding the mature mouse CRG-2/IP-10 protein sequence (MIPLARTVRCNCHIHIIDDGPVRM-RAIGKLEIIPASLSCPRVEIATMKNDEQRCLNPESKTIKNLMKAFSQKRSKRAP).^{1,2} The methionyl form of the *E. coli*-expressed mature CRG-2 contains 78 amino acid residues and has a predicted molecular mass of ~ 8.8 kDa.

Recombinant Mouse CRG-2 (IP-10, CXCL10) is a member of the chemokine α subfamily that lacks the ELR domain.³ Mouse CRG-2 cDNA encodes a 98 amino acid residue precursor protein with a 21 amino acid residue signal peptide that is cleaved to form the 77 amino acid residue secreted mature protein. Mature mouse CRG-2 shares $\sim 67\%$ amino acid sequence identity with human IP-10.

The gene for CRG-2, a mouse homolog of human IP-10 (interferon- γ -inducible protein 10), was originally identified as an immediate early gene induced in response to macrophage activation. It has since been shown that CRG-2 mRNA is induced by $\alpha/\beta/\gamma$ -interferons and by lipopolysaccharides in macrophages, astrocytes, and microglia. CRG-2 functions primarily as a chemoattractant for activated T lymphocytes.^{3,4}

Recombinant Mouse CRG-2 is lyophilized from a $0.2\text{ }\mu\text{m}$ filtered PBS solution, pH 7.4, containing $50\text{ }\mu\text{g}$ bovine serum albumin per $1\text{ }\mu\text{g}$ of cytokine.

Purity: $\geq 97\%$ (SDS-PAGE)

The biological activity is measured by its ability to chemoattract human lymphocytes cultured in the presence of IL-2 for 21 days⁵ or mouse BaF/3 cells transfected with hCXCR-3.

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.

Preparation Instructions

The lyophilized powder can be reconstituted in $0.2\text{ }\mu\text{m}$ filtered phosphate buffered saline containing a minimum of 0.1% human serum albumin or bovine serum albumin. A stock solution should be prepared at $\geq 20\text{ }\mu\text{g/ml}$.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$ prior to reconstitution. Lyophilized samples are stable for >6 six months at $-20\text{ }^{\circ}\text{C}$ to $-70\text{ }^{\circ}\text{C}$.

After reconstitution, store under sterile conditions at $2\text{--}8\text{ }^{\circ}\text{C}$ for up to one month. Alternatively, reconstituted product can be stored at $-20\text{ }^{\circ}\text{C}$ for up to three months without detectable loss of activity. Repeated freezing and thawing are not recommended.

References

1. Ohmori, Y., and Hamilton, T.A., Biochem. Biophys. Res. Commun., **168**, 1261 (1990).
2. Vanguri, P., and Farber, J.M., J. Biol. Chem., **265**, 15049 (1990).
3. Guidebook to Cytokines and Their Receptors, Nicola, Nicos A., (ed.) pp. 67-72 (Oxford University Press, Oxford, England, 1994) (Sambrooke and Tooze Publication at Oxford University Press, 1994), pp. 67-72.
4. Ohmori, Y., and Hamilton, T.A., Biochem. Biophys. Res. Comm., **198**, 590 (1994).
5. Loetscher, M., et al., J. Exp. Med., **184**, 963 (1996).

SC,KAA,MAM 09/12-1