

## Product Information

### Cytokine-Induced Neutrophil Chemoattractant 3 (CINC-3) Rat, Recombinant Expressed in *Escherichia coli*

Product Number **C 4354**

#### Product Description

Recombinant rat cytokine-induced neutrophil chemoattractant 3 (CINC-3, MIP-2) is expressed in *Escherichia coli*. The cDNA sequence encodes the mature rat CINC-3 protein sequence SELRCQCLT-TLPRVDFKNIQSLTVTPPGPHCAQTEVIATLKDGEV CLNPEAPLVQRIVQKILNKGKAN.<sup>1</sup> Mature recombinant rat CINC-3 contains a 69 amino acid residue and has a calculated molecular mass of approximately 7.6 kDa.

Cytokine-induced neutrophil chemoattractant 3 (CINC-3, MIP-2) is a member of the alpha (CXC) subfamily of chemokines. The four cytokine-induced neutrophil chemoattractants include CINC-1, CINC-2 $\alpha$ , CINC-2 $\beta$  and CINC-3. Recombinant rat CINC-3 (macrophage inflammatory protein-2) has an additional tyrosine residue at the carboxyl terminus.<sup>2</sup> Rat CINC-3 and murine MIP-2 proteins share 88% homology. The rat chemokines CINC-2 $\alpha$  and CINC-2 $\beta$  were originally purified as novel neutrophil chemoattractants from conditioned medium of rat granulation tissue (also present in LPS-induced inflammatory exudate) which also contains CINC-1 and CINC-3.<sup>3</sup>

The CINC3s are major neutrophil chemotactic factors in rats, which contribute to neutrophil infiltration into inflammatory sites.<sup>3</sup> CINC-3 is a potent chemotactic factor for rat neutrophils *in vivo* and *in vitro*.<sup>4</sup> It is postulated that rat neutrophils have at least two classes of CINC receptors: a class of CINC-3-specific receptor as well as a second common receptor shared by all CINC3s.<sup>5</sup>

#### Reagents

CINC-3 is supplied as approximately 25  $\mu$ g of protein lyophilized from a 0.2  $\mu$ m filtered solution in 30% acetonitrile, 0.1% TFA containing 1.25 mg of bovine serum albumin.

#### Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 25  $\mu$ g/ml.

#### Storage/Stability

Store at  $-20^{\circ}\text{C}$ . Upon reconstitution, store at  $2^{\circ}$ - $8^{\circ}\text{C}$  for one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended.

#### Product Profile

CINC-3 is measured by its ability to induce myeloperoxidase release from cytochalasin B treated human neutrophils.<sup>6</sup> The ED<sub>50</sub> for this effect is generally 1-3  $\mu$ g/ml. 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. Purity: >97% as determined by SDS-PAGE, visualized by silver stain. Endotoxin: < 0.1 ng/ $\mu$ g of CINC-3, determined by the LAL method.

#### References

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2. Murakami, K., et al., Identification and characterization of receptor for cytokine-induced neutrophil chemoattractant-3 on rat neutrophils. *Biochem Biophys. Res. Commun.*, **232**, 562-567 (1997).
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4. Huang, S., et al., Expression of macrophage inflammatory protein-2 and KC mRNA in pulmonary inflammation. *Am. J. Pathol.*, **141**, 981-988 (1992).
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6. Schroder, J. M., et al., Purification and partial biochemical characterization of a human monocyte-derived, neutrophil-activating peptide that lacks interleukin 1 activity. *J. Immunol.*, **139**, 3474-3483 (1987).

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