

## Product Information

### Monoclonal Anti-Macrophage Inflammatory Protein-2 Clone 40605

produced in rat, purified immunoglobulin

Catalog Number **M5196**

#### Product Description

Anti-Macrophage Inflammatory Protein-2 (Cxcl2) is developed from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, *E. coli*-derived, recombinant mouse macrophage inflammatory protein 2 (GeneID 20310). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Anti-Macrophage Inflammatory Protein-2 (Cxcl2) recognizes mouse Macrophage Inflammatory Protein-2. Applications include neutralization, immunoblotting and ELISA. In sandwich ELISAs, less than 0.05% cross-reactivity was observed with rhGRO $\beta$ , rhGRO $\gamma$ , rmC10, rmJE, rmMIP-1 $\alpha$ , rmMIP-1 $\beta$ , rhRANTES and rmKC.

MIP-2 is a member of the C-X-C, or a chemokine class. It contains the ELR domain immediately preceding the first cysteine residue near the amino terminus. Other chemokines in this group include IL-8, GRO $\alpha/\beta/?$ , mouse KC, ENA-78, GCP-2, PBP/CTAPIII/ $\beta$ -TG/NAP-2. These chemokines act primarily on neutrophils as chemoattractants and activators, including neutrophil degradation with release of myeloperoxidase and other enzymes. MIP-2 was originally identified as a heparin binding protein secreted from a murine macrophage cell line in response to endotoxin stimulation. MIP-2 is an approximately 8 kDa polypeptide of 73 amino acids. The precursor form of MIP-2 consists of 100 amino acids. To generate the mature MIP-2, the precursor cleaves its amino-terminal 27 amino acids. MIP-2 shows 60% amino acid homology to human GRO $\beta$  and GRO $\gamma$ .

#### Reagent

Supplied lyophilized from a 0.2  $\mu$ m filtered solution of phosphate buffered saline with 5% trehalose.

#### 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

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.

#### Storage/Stability

Prior to reconstitution, store at  $-20^{\circ}\text{C}$ . The reconstituted product may be stored at  $2-8^{\circ}\text{C}$  for up to one month. For extended storage, freeze in working aliquots at  $-20^{\circ}\text{C}$ . Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended.

#### Neutralization

The Neutralization Dose<sub>50</sub> (ND<sub>50</sub>) for this antibody is defined as that concentration of antibody required to yield one-half maximal inhibition of the cytokine activity on a responsive cell line, when that cytokine is present at a concentration just high enough to elicit a maximum response.

#### Product Profile

**Immunoblotting:** a working concentration of 1-2  $\mu$ g/mL is recommended. The detection limit for rmCxcl2 is  $\sim 5$  ng/lane under non-reducing conditions.

**ELISA capture:** This antibody can be used as a capture antibody in a mouse MIP-2 ELISA in combination with a biotinylated polyclonal detection antibody. Using plates coated with 100  $\mu$ L/well of the capture antibody at 2  $\mu$ g/mL, in combination with 100  $\mu$ L/well of the detection antibody, an ELISA for sample volumes of 100  $\mu$ L can be obtained. To arrive at the optimal dose range for this ELISA, set up a two-fold dilution series of the protein standard starting with 1 ng/mL.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

Endotoxin: < 0.1 EU/μg antibody as determined by the LAL method.

**Reference**

1. Schröder, J., et al., J. Immunol., **139**, 3474 (1987).

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