



## User Manual

**Macrophage Inflammatory Protein-2 (MIP-2) (Viral)**

**Cat. No. VEOPP-22022**

**Description:**

Viral MIP-2 cDNA encodes a 94 amino acid residue precursor protein with a 23 aa residue signal peptide that is cleaved to yield a 71 aa residue mature protein. Among human chemokines, ViMIP-2 is most closely related to MIP-1 $\alpha$ , sharing approximately 41% amino acid sequence identity. At the amino acid sequence level, ViMIP-1 and ViMIP-2 also share 48% identity. ViMIP-1 and ViMIP-2 are more closely related to one another phylogenetically than to other human chemokines, suggesting that they may have arisen by gene duplication within the virus rather than by two independent gene acquisitions. ViMIP-2 binds to the CCR3 chemokine receptor through which eotaxin and other  $\beta$  chemokines activate eosinophils. ViMIP-2 has been shown to activate and chemoattract human eosinophils.

**Source:**

*Escherichia coli*

**Unit:**

50  $\mu$ g

**Reconstitution:**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at  $< -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.

**Storage:**

This lyophilized preparation is stable at 2-8 $^{\circ}\text{C}$ , but should be kept at -20 $^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working

aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

### **Molecular Weight:**

Approximately 7.9 kDa, a single, non-glycosylated polypeptide chain containing 70 amino acids.

### **Endotoxin:**

Less than 1 EU/μg of MIP-2 as determined by LAL method.

### **Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

### **Biological Activity:**

The specific activity is determined by the inhibitory effect on monocyte migration response to human MIP-1 alpha using a concentration range of 1.0-10.0 μg/mL of viral MIP-2 will inhibit 25 ng/mL of human MIP-1 alpha.

### **Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

### **AA Sequence:**

LGASWHRPDK CCLGYQKRPL PQVLLSSWYP TSQLCSKPGV IFLTKRGRQV  
CADKSKDWVK KLMQQLPVTA

### **Purity:**

> 97% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

Cyagen Biosciences reserves all rights on the technical documents of its culture products. No part of this document may be reproduced or adapted for other purposes without written permission from Cyagen Biosciences.