



## User Manual

**beta-Defensin 1 (BD-1) (Murine)**

**Cat. No. MEOPP-02011**

**Description:**

Defensin are 3-4 kDa antimicrobial peptides of which three distinct families have been identified;  $\alpha$ -defensin,  $\beta$ -defensins, and insect defensins. Mouse  $\beta$ -Defensin 1, as a member of the  $\beta$ -defensin family, is a salt-sensitive antimicrobial peptide present in epithelia of the lung and urogenital tract. The predicted amino acid sequence shows the hallmark features of other known epithelial  $\beta$ -defensins, including the ordered array of six cysteine residues. It likely plays an important role in innate immunity at multiple mucosal sites in a number of reports.

**Source:**

*Escherichia coli*

**Unit:**

5  $\mu$ 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 PBS, pH 7.4.

**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 5.2 kDa, a single non-glycosylated polypeptide chain containing 48 amino acids.

**Endotoxin:**

Less than 1 EU/μg of BD-1 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 biological activity is determined by a chemotaxis bioassay using CD34+ dendritic cells is in a concentration range of 100.0-1000.0 ng/mL.

**Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

**AA Sequence:**

VGILTSLGRR TDQYKCLQHG GFCLRSSCPS NTKLQGTCKP DKPNCCKS

**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.

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