**BD-1, Rat**

**Cat. No.:** Z02946-20  
**Size:** 20 μg  
**Synonyms:** Beta-defensin 1, BD-1, rBD-1, Defensin beta 1, Defb1.

**Description:** Defensin are 3-4 kDa antimicrobial peptides of which three distinct families have been identified; α-defensins, β-defensins, and insect defensins. Rat β-Defensin 1, as a member of the β-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 β-defensins, including the ordered array of six cysteine residues.

**Amino Acid Sequence:** DQYRCLQNGG FCLRSSCPSH TKLQGTCKPD KPNCCRS

**Source:** *E. coli*  
**Species:** Rat

**Biological Activity:** Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using CD34+ dendritic cells is in a concentration range of 100.0-1000.0 ng/ml.

**Molecular Weight:** Approximately 4.1 kDa, a single non-glycosylated polypeptide chain containing 37 amino acids.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PBS, 500 mM NaCl, pH 7.0.

**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 °C. Further dilutions should be made in appropriate buffered solutions.

**Purity:** > 95 % by SDS-PAGE and HPLC analyses.

**Endotoxin Level:** Less than 1 EU/μg of rRtBD-1 as determined by LAL method.

**Storage:** This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.