BD-4, Rat

Cat. No.: Z02948-1
Size: 1 mg

Description:
Defensins (alpha and beta) are cationic peptides with a broad spectrum of antimicrobial activity that comprise an important arm of the innate immune system. The α-defensins are distinguished from the β-defensins by the pairing of their three disulfide bonds. To date, four rat β-defensins have been identified; BD-1, BD-2, BD-3 and BD-4. The β-defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence. β-defensins contain a six-cysteine motif that forms three intramolecular disulfide bonds. β-defensins are 3-5 kDa peptides ranging in size from 33-47 amino acid residues. BD-4 is expressed in testis, stomach, uterus, neutrophils, thyroid, lung and kidney.

Amino Acid Sequence:
QSINNPITCL TKGGVCWGPC TGGFRQIGTC GLPRVRCCKK

Source: E. coli
Species: Rat
Biological Activity: Fully biologically active when compared to standard. The biologically active determined by a chemotaxis bioassay using human monocytes is in a concentration range of 0.1-100.0 ng/ml.

Molecular Weight: Approximately 4.4 kDa, a single non-glycosylated polypeptide chain containing 41 amino acids.

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

Formulation: Lyophilized from a 0.2 μm filtered concentrated solution in 10 mM PB, pH 7.4, 500 mM NaCl.

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-4 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.

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