

BD-4
Catalog # PVGS1162

Specification

BD-4 - Product Information

Primary Accession [O88514](#)
Species
Rat

Sequence
Gln23-Lys63

Purity
> 95% as analyzed by SDS-PAGE
> 95% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

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.

Expression System
E. coli

Theoretical Molecular Weight
4.4 kDa

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

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

BD-4 - Additional Information

Gene ID 64389

Other Names
Beta-defensin 4, BD-4, BD-2, Defensin, beta 4, RBD-2, RBD-4, Defb4, Defb2, Defb3

Target Background
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 intra-molecular 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.

BD-4 - Protein Information

Name Defb4

Synonyms Defb2, Defb3

Function

Exhibits antimicrobial activity against Gram-negative bacteria and Gram-positive bacteria. May act as a ligand for C-C chemokine receptor CCR6. Binds to CCR6 and induces chemotactic activity of CCR6-expressing cells.

Cellular Location

Secreted.

Tissue Location

Highly expressed in lung.

BD-4 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BD-4 - Images