

BD-1
Catalog # PVGS1132**Specification**

BD-1 - Product Information

Primary Accession [O89117](#)
Species
Rat

Sequence
Asp33-Ser69

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 biological activity determined by a chemotaxis bioassay using CD34⁺ dendritic cells is in a concentration range of 100.0-1000.0 ng/ml.

Expression System
E. coli

Theoretical Molecular Weight
4.1 kDa

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

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-1 - Additional Information

Gene ID 83687

Other Names
Beta-defensin 1, BD-1, rBD-1, Defensin, beta 1, Defb1

Target Background

Defensins 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.

BD-1 - Protein Information

Name Defb1

Function

Has bactericidal activity. May act as a ligand for C-C chemokine receptor CCR6. Positively regulates the sperm motility and bactericidal activity in a CCR6-dependent manner. Binds to CCR6 and triggers Ca^{2+} mobilization in the sperm which is important for its motility.

Cellular Location

Secreted {ECO:0000250|UniProtKB:P60022}. Membrane {ECO:0000250|UniProtKB:P60022}.
Note=Associates with tumor cell membrane-derived microvesicles.
{ECO:0000250|UniProtKB:P60022}

Tissue Location

Highly expressed in kidney.

BD-1 - 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-1 - Images