

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Human beta-Defensin 1 (rHuBD-1)

Catalog Number: PR1007

Source: Escherichia coli.

Quantity: 5µg/25µg/1.0mg

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 human β -defensins have been identified; BD-1, BD-2, BD-3 and BD-4. β -defensins are expressed on some leukocytes and at epithelial surfaces. In addition to their direct antimicrobial activities, they are chemoattractant towards immature dendritic cells and memory T cells. The β -defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence and, in the case of BD-1 (36 a.a.), a propeptide region. 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.

Molecular Weight:

Approximately 5.0 KDa, a single non-glycosylated polypeptide chain containing 47 amino acids.

Purity:

>98% by SDS-PAGE and HPLC analyses.

Biological Activity:

Fully biologically active when compared to standard. Determined by its ability to chemoattract CD34+ dendritic cells using a concentration range of 0.1-1.0 µg/ml, corresponding to a Specific Activity of ≥ 1000 IU/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2µm filtered concentrated solution in 20mM PB, pH 7.4, 130mM NaCl.

AA Sequence:

G N F L T G L G H R S D H Y N C V S S G G Q C L Y S A
C P I F T K I Q G T C Y R G K A K C C K

Endotoxin:

Less than 1EU/µg of rHuBD-1 as determined by LAL method.

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 $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage:

This lyophilized preparation is stable at $2-8^{\circ}\text{C}$, 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 $2-8^{\circ}\text{C}$. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C . Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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