

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Human beta-Defensin 4 (rHuBD-4)

Catalog Number: PR1010

Source: Escherichia coli.

Quantity: 5µg/20µg/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. 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. In addition to its direct antimicrobial activities, BD-4 is chemoattractant towards human blood monocytes.

Molecular Weight:

Approximately 6.0 KDa, a single non-glycosylated polypeptide chain containing 50 amino acids.

Purity:

>98% by SDS-PAGE and HPLC analyses.

Biological Activity:

Determined by its ability to chemoattract human monocytes using a concentration range of 0.1-100.0 ng/ml, corresponding to a Specific Activity of 1×10^4 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:

E F E L D R I C G Y G T A R C R K K C R S Q E Y R I G
R C P N T Y A C C L R K W D E S L L N R T K P

Endotoxin:

Less than 1EU/µg of rHuBD-4 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 -20°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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