

## BD-4

Catalog # PVGS1045

## **Product Information**

Primary Accession Q8WTQ1
Species Human

**Sequence** Glu23-Pro72

Purity > 98% as analyzed by SDS-PAGE

> 98% as analyzed by HPLC

**Endotoxin Level** 

**Biological Activity** Fully biologically active when compared to standard. The biological activity

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 6.0 kDa

Formulation Lyophilized from a 0.2 Im filtered solution in 20 mM PBS, pH 7.4, 130 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.

## **Additional Information**

**Gene ID** 140596;503618

Other Names Beta-defensin 104, Beta-defensin 4, BD-4, DEFB-4, hBD-4, Defensin, beta 104,

DEFB104A, DEFB104, DEFB4

**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  $\alpha$ -defensins are distinguished from the  $\beta$ -defensins by the pairing of their three disulfide bonds. To date, four human  $\beta$ -defensins have been identified; BD-1, BD-2, BD-3 and BD-4. The  $\beta$ -defensin proteins are expressed as the C-terminal portion of precursors and are released by proteolytic cleavage of a signal sequence.  $\beta$ -defensins contain a six-cysteine motif that forms three intra-molecular disulfide bonds.  $\beta$ -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.

## **Protein Information**

Name DEFB104A

Synonyms DEFB104, DEFB4

**Function** Has antimicrobial activity. Synergistic effects with lysozyme and DEFB103.

**Cellular Location** Secreted.

**Tissue Location** High expression in the testis. Gastric antrum exhibited relatively high levels. A

lower expression is observed in uterus and neutrophils thyroid gland, lung,

and kidney. No detectable expression in other tissues tested.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.