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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 □m 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 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.

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.