



Beta Defensin-1, rat recombinant (rrBD-1)

Catalog No: 97411
Lot No: XXXXX
Source: *E. coli*
Synonyms: Beta-defensin 1, BD-1, rBD-1, Defensin beta 1, Defb1

Background

The Defensin family are highly similar in their protein sequence and are microbicidal & cytotoxic peptides made by neutrophils. Beta Defensin-1 is an antimicrobial peptide having the resistance of epithelial surfaces to microbial colonization. Beta Defensin-1 has close proximity to Defensin Alpha-1 and has been implicated in the pathogenesis of cystic fibrosis. Skin of patients having atopic dermatitis patients and mycosis fungoides (non-lesional and lesional) show lower human Beta Defensin-1 mRNA expression and higher human Beta Defensin-2 and human Beta Defensin-3 mRNA expression. Beta Defensin is highly expressed by epithelial cells. Beta-defensin 1 may play a role in the pathogenesis of severe sepsis.

Description

BD-1 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 37 amino acids and having a molecular mass of 4.1 kDa. BD-1 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

BD-1 protein was lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Beta Defensin-1 in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized BD-1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BD-1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

DQYRCLQNGG FCLRSSCP SH TKLQGTCKPD KPNCCRS

Activity

Measured by its ability to chemoattract CD34+ dendritic cells using a concentration range of 0.1 - 1.0 µg/ml.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.

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