



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

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