

**BACKGROUND:**

Beta-Defensin-3 (BD-3), also known as DEFB-3, is a member of the defensin class of antimicrobial peptides. Beta defensins exert host defense responses against viruses, bacteria, and fungi through the binding and permeabilizing of microbial membranes. BD-3 expression is stimulated by interferon-gamma and is an important molecule during adaptive immunity. BD-3 functions to activate monocytes and mast cells, and has antibacterial functions towards Gram-negative and Gram-positive bacteria. Further, BD-3 blocks human immunodeficiency virus type 1 (HIV-1) replication through the downregulation of the HIV-1 co-receptor, CXCR4.

Recombinant human Beta-Defensin-3 is a non-glycosylated protein monomer, containing 45 amino acids and having a molecular mass of 5.2 kDa.

**Cat. No.:**  
RP1192

**Alternate Names:**  
DEFB-3

**AA Sequence:**  
GIINTLQKYY    CRVRGGRCAV    LSLCLPKEEQI  
GKCSTRGRKC    CRRKK

**TECHNICAL INFO**

**Source:**  
*E. coli*

**Physical Appearance:**  
Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**  
0.1% Trifluoroacetic Acid (TFA)

**Stability:**  
Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**  
Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile 10 mM Acetic acid at 0.1 mg/mL, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm.
- RP-HPLC calibrated against a known standard.
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**  
Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

