Overview

Synonyms	Beta-defensin 3, BD-3, Defensin beta 3, Defb3
Description	Beta defensin-3, also known as BD-3 and DEFB-3, is a membrane active cationic peptide that functions in inflammation and innate immune responses and coded by Defb 3 gene on chromosome 8 in mouse. There are at least 30 ² -defensins which are distinguished from ±-defensins by the connectivity pattern of their three intramolecular disulfide bonds. BD3 is widely expressed among epithelial tissues, notably by keratinocytes and airway epithelial cells. It is upregulated in response to proinflammatory cytokines, microbial and viral infections, and at the edges of skin wounds. BD3 induction in osteoarthritis chondrocytes promotes MMP1 and 13 productions and inhibits TIMP1 and 2 expressions.
Species	Rat
Source	*E. coli*
Biological Activity	Fully biologically active when compared to standard. Measured by its antimicrobial activity against E. coli. The ED_{50} for this effect is typically 4-20 µg/ml.
Sequence	KKVYNAVSCM TNGGICWLKC SGTFREIGSC GTRQLKCCKK K

Properties

Measured Molecular Weight	Approximately 4.5 kDa, a single non-glycosylated polypeptide chain containing 41 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at d -20 °C. Further dilutions should be made in appropriate buffered solutions.
Endotoxin Level	Less than 1 EU/µg of rRtBD-3 as determined by LAL method.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Storage	This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. **Avoid repeated freeze/thaw cycles.**

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura,
Delhi – 110034 (INDIA).
Mobile: +91-9810521400, Ph: +91-11-42208000
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com