

Growth Factor Data Sheet

GoldBio growth factors are manufactured for **RESEARCH USE ONLY** and cannot be sold for human consumption!

Rat beta-defensin 3 (DEFB3) is an antimicrobial peptide that contributes to the innate and adaptive immune systems and is active against gram-negative and gram-positive bacteria, fungi, and viruses. Like the other β -defensins, DEFB3 is a small protein that contains a motif consisting of six cysteine residues which form three intramolecular disulfide bridges. It is expressed in epithelial tissue of many organs, including the skin and lungs, and in leukocytes. Expression of DEFB3 is induced by proinflammatory cytokines such as IL1B and IFNG. Expression of rat DEFB3 was also found to be induced in bronchoalveolar lavage fluid by inflammatory diesel exhaust particles. DEFB3 is a cationic peptide that disrupts the membranes of invading microbes, which are negatively charged due to the presence of lipopolysaccharides (LPS) or lipoteichoic acid (LTA). Inhibition of DEFB3 by high salt concentration may play a role in the pathogenesis of cystic fibrosis.

Catalog Number	1590-03
Product Name	DEFB3, Rat Recombinant Rat Defensin, Beta 3 BD3, DEFB-3, RBD-3, DEFB103A
Source	<i>Escherichia coli</i>
MW	~4.5 kDa (41 amino acids)
Sequence	KKVYNAVSCM TNGGICWLKC SGTFREIGSC GTRQLKCKK K
Accession Number	Q32Z14
Purity	>95% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. Measured by its antimicrobial activity against <i>E. coli</i> . The ED ₅₀ for this effect is typically 4-20 μ g/ml.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.