

Recombinant Human BD-1 (47 a.a.)

CATALOG #:	4506-20	20 µg
	4506-1000	1 mg
LOT #:	_____	
SYNONYMS:	Beta-defensin 1, BD-1, Defensin beta 1, hBD-1, HBD1, HBP1, DEFB1, HBD-1, HBP-1, DEFB101, DEFB-1, MGC51822.	
SOURCE:	<i>E. coli</i>	
PURITY:	>98% by SDS-PAGE analyses Endotoxin level is <0.1 ng per µg.	
MOL. WEIGHT:	5.0 kDa	
FORM:	Lyophilized from a concentrated (1 mg/ml) solution containing 20 mM PBS pH-7.4 and 130 mM sodium chloride	
RECONSTITUTION:	Centrifuge the vial prior to opening. Reconstitute in dH ₂ O to a concentration of 0.1-1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 4°C for 1 week or -20°C for future use.	
STORAGE CONDITIONS:	The lyophilized protein is best-stored desiccated below 0°C. Reconstituted human BD-1 should be stored in working aliquots at -20°C.	

DESCRIPTION:

The Defensin family is highly similar in their protein sequence and is microbicidal & cytotoxic peptides made by neutrophils. Beta Defensin-1 (BD-1) is an antimicrobial peptide having the resistance of epithelial surfaces to microbial colonization. BD-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 BD-1 mRNA expression and higher human BD-2 and human BD-3 mRNA expression. Beta Defensin is highly expressed by epithelial cells. BD-1 may play a role in the pathogenesis of severe sepsis. Variation in human BD-1 contributes to asthma diagnosis, with apparent gender-specific effects. Human BD-3 is a dimer, while Human BD-1 and Human BD-2 are monomeric. Recombinant human Beta Defensin-1 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 47 amino acids and having a molecular mass of 5 kDa.

BIOLOGICAL ACTIVITY:

Determined by its ability to chemoattract CD34⁺ dendritic cells using a concentration range of 0.1-1 µg/ml.

RELATED PRODUCTS:

Apoptosis Detection Kits & Reagents

- Annexin V Kits & Bulk Reagents
- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers and Set
- Apoptosis siRNA Vectors

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

Cell Proliferation & Senescence

- Quick Cell Proliferation Assay Kit
- Senescence Detection Kit
- High Throughput Apoptosis/Cell Viability Assay Kits
- LDH-Cytotoxicity Assay Kit
- Bioluminescence Cytotoxicity Assay Kit
- Live/Dead Cell Staining Kit

Cell Damage & Repair

- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents
- DNA Damage Quantification Kit
- Glutathione & Nitric Oxide Fluorometric & Colorimetric Assay Kits

Signal Transduction

- cAMP & cGMP Assay Kits
- Akt & JNK Activity Assay Kits
- Beta-Secretase Activity Assay Kit

Adipocyte & Lipid Transfer

- Recombinant Adiponectin, Survivin, & Leptin
- CETP Activity Assay & Drug Discovery Kits
- PLTP Activity Assay & Drug Discovery Kits
- Total Cholesterol Quantification Kit

Molecular Biology & Reporter Assays

- siRNA Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit
- β -Galactosidase Staining Kit & Luciferase Reporter Assay Kit

Growth Factors and Cytokines

Monoclonal and Polyclonal Antibodies