

beta Defensin-3 Recombinant Protein | BD-3 recombinant protein

Human beta Defensin-3 Recombinant

CATALOG #	HOST
AAA76069	E Coli (Host protein expression may be lot-specific and can be subject to change during production, including bulk orders)

PRODUCT SYNONYMS

beta Defensin-3; Human beta Defensin-3 Recombinant; beta defensin; defb4; bd-3; bd3; BD-3 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli (Host protein expression may be lot-specific and can be subject to change during production, including bulk orders)
Purity/Purification	>98%, as determined by SDS-PAGE and HPLC
Form/Format	Recombinant Human beta Defensin-3 was lyophilized from 0.2 um filtered 100mM NaCl, 20mM PB, pH 7.4.
Sequence	MRIHYLLFAL LFLFLVPVPG HGGIINTLQK YYCRVRGGRC AVLSCLPKEE QIGKCSTRGR KCCRRKK
Sequence Length	67
Domain	Defensin
Host Note	Optimized DNA sequence encoding Human beta Defensin-3 mature chain was expressed in Escherichia Coli.
Biological Activity	The ED(50) was determined by its antimicrobial resistance to E.coli and was determined to be <3 ug/mL
Endotoxin	Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/ug (1EU/ug).
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Molecular Weight Note	Native human BD-3 is generated by the proteolytic removal of the signal peptide and propeptide, the molecule has a calculated molecular mass of approximately 5 kDa. Recombinant beta Defensin-3 is a disulfide-linked monomer protein consisting of 46 amino acid residue subunits, and migrates as an approximately 5 kDa protein under non-reducing and reducing conditions in SDS-PAGE.
Preparation and Storage	The lyophilized protein is stable for at least 2 years from date of receipt at -20 degree C. Upon reconstitution, this cytokine can be stored in working aliquots at 2 degree - 8 degree C for one month, or at -20 degree C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

ADDITIONAL INFORMATION

Related Product Information for BD-3 recombinant protein	Defensins are a large family of peptides of which two groups exist in mammals: alpha defensins and beta defensins, which are distinguishable by the spacing and connectivity of the conserved cysteine residues within the mature peptides. It is thought that defensins function in the eradication of pathogens from the host system by inserting themselves into the bacterial membrane under the influence of membrane potential, forming channels which lead to leakage of cytoplasmic molecules and cell death. Unlike hBD-1, this second peptide, human beta-defensin-2 (hBD-2), is regulated at a transcriptional level in response to contact with microorganisms, and is highly effective in killing the gram negative bacteria. Its expression is also upregulated by the cytokine tumor necrosis factor-alpha.
Product Categories/Family for BD-3 recombinant protein	Cytokines

References	• microbial targeting of 99mtc-labeled recombinant human γ-defensin-3 in an animal model of infection: a feasibility pilot study .<i>J. Nucl. Med.</i>, May 2009; 50: 823 - 826. • expression of avian γ-defensin 3, an antimicrobial peptide, by sperm in the male reproductive organs and oviduct in chickens: an immunohistochemical study .<i>Poult. Sci.</i>, Dec 2008; 87: 2653 - 2659. • mouse beta-defensin-14, an antimicrobial ortholog of human beta-defensin-3 .<i>Antimicrob. Agents Chemother.</i>, May 2008; 52: 1876 - 1879. • wall teichoic acid deficiency in staphylococcus aureus confers selective resistance to mammalian group iia phospholipase a2 and human γ-defensin 3 .<i>Infect. Immun.</i>, May 2008; 76: 2169 - 2176. • analysis and separation of residues important for the chemoattractant and antimicrobial activities of γ-defensin 3 .<i>J. Biol. Chem.</i>, Mar 2008; 283: 6631 - 6639.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	125656159
NCBI GeneID	414325
NCBI Accession #	NP_001075020.1
NCBI GenBank Nucleotide #	NM_001081551.2
UniProt Accession #	P81534; Q8NFG6; Q9NPF6; Q5U7J2
NCBI Official Full Name	beta-defensin 103
UniProt Protein Name	Beta-defensin 103
UniProt Gene Name	DEFB103A
UniProt Synonym Gene Names	BD3; DEFB103; DEFB3; BD-3; DEFB-3; HBD3; hBD-3
UniProt Entry Name	D103A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/defb103a-recombinant-protein-e-coli/76069>