9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

BD 1 Human

Beta Defensin-1 Human Recombinant
CYK0067

Product Overview

Name	BD 1 Human
Description	
Beta Defensin-1 Human Recombinant	
Accession (Primary)	P60022
Synonyms	
Beta-defensin 1, BD-1, Defensin beta 1, hBD-1, HBD1, HBP1, DEFB1, HBD-1, HBP-1, DEFB101, DEFB-1, MGC51822.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
The Human BD-1 was lyophilized from a concentrated (1mg/ml) solution containing 20mM PBS pH-7.4 and 130mM sodium chloride.	
Stability	
Lyophilized Beta Defensin-1 Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BD-1 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.	
Purity	
Greater than 98.0% as determined by(a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	
GNFLTGLGHR SDHYNCVSSG GQCLYSACPI FTKIQGTCYR GKAKCCK.	
Biological Activity	
Determined by its ability to chemoattract CD34+ dendritic cells using a concentration range of 100-1000ng/ml corresponding to a specific activity of 1,000-10,000IU/mg.	
Solubility	
It is recommended to reconstitute the lyophilized Beta Defensin-1 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.	

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Background

Beta Defensin-1 Human Recombinant: Unveiling its Potential in Innate Immunity and Therapeutic Applications Abstract: Beta Defensin-1 (BD-1), a member of the defensin family, plays a crucial role in innate immunity and host defense. This research paper provides an overview of BD-1 human recombinant, exploring its molecular characteristics, antimicrobial properties, and therapeutic applications. Understanding the multifaceted role of BD-1 offers new avenues for developing innovative immunotherapies. This article offers a concise analysis of BD-1, highlighting its impact on innate immunity and its therapeutic potential. Introduction: Innate immunity serves as the first line of defense against invading pathogens. BD-1, a key peptide within the defensin family, exhibits broad-spectrum antimicrobial activity and plays a pivotal role in host defense mechanisms. This paper provides an overview of BD-1, shedding light on its structure, function, and therapeutic potential. BD-1 Structure and Function: BD-1 is a cationic peptide with a conserved cysteine motif that confers its antimicrobial properties. It acts by disrupting the integrity of microbial cell membranes, leading to microbial death. Additionally, BD-1 exhibits immunomodulatory effects by stimulating immune cell recruitment and cytokine production. Antimicrobial Properties and Therapeutic Applications: BD-1 demonstrates antimicrobial activity against a wide range of pathogens, including bacteria, fungi, and viruses. Its ability to combat multidrug-resistant strains makes it an attractive candidate for the development of novel antimicrobial therapies. Furthermore, BD-1's immunomodulatory effects contribute to its potential in treating inflammatory and infectious diseases. Therapeutic Potential of BD-1 Human Recombinant: BD-1 human recombinant holds significant promise in the field of immunotherapy. Strategies aimed at enhancing BD-1 expression or delivering exogenous BD-1 may help boost innate immune responses in patients with compromised immune systems or chronic infections. Furthermore, BD-1-based therapeutics could be developed to combat antibiotic-resistant infections and prevent biofilm formation. Challenges and Future Directions: While BD-1 shows immense therapeutic potential, challenges must be addressed. Further research is necessary to optimize the delivery methods of BD-1 and evaluate its long-term safety and efficacy. Additionally, understanding the interplay between BD-1 and other immune factors will aid in developing combinatorial approaches for enhanced therapeutic outcomes. Conclusion: BD-1 human recombinant represents a promising avenue for developing novel immunotherapies and combating antimicrobial resistance. Understanding the molecular mechanisms and functional implications of BD-1 in innate immunity opens new horizons for innovative treatments. Continued research in this field has the potential to revolutionize the field of immunotherapy and improve patient outcomes.

Precautions

BD 1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P60022)

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