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

CRYAB Human, His

Crystallin Alpha B Human Recombinant, His Tag
RCP0543

Product Overview

Name	CRYAB Human, His
Description	
Crystallin Alpha B Human Recombinant, His Tag	
Accession (Primary)	P02511
Synonyms	
CRYA2, CTPP2, HSPB5, Crystallin Alpha B, CRYAB.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile filtered colorless solution.	
Formulation	
The CRYAB solution (1mg/ml) contains 10% glycerol & Phosphate-Buffered Saline (pH 7.4).	
Stability	
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.	
Purity	
Greater than 90% as determined by SDS-PAGE.	
Amino acid sequence	
MDIAIHHPWI RRPFFPFHSP SRLFDQFFGE HLLESDLFPT STSLSPFYLR PPSFLRAPSW FDTGLSEMRL EKDRFSVNLD VKHFSPEELK VKVLGDVIEV HGKHEERQDE HGFISREFHR KYRIPADVDP LTITSSLSSD GVLTVNGPRK QVSGPERTIP ITREEKPAVT AAPKK LEHHH HHH .	
Background	
Alpha-B crystallin (CRYAB), a small heat shock protein, stands as a multifaceted molecular chaperone integral to cellular homeostasis and stress response. In its human recombinant form, CRYAB becomes a focal point in biomedical research, offering a controlled platform to explore its structural intricacies, cellular functions, and potential therapeutic applications. This research embarks on a comprehensive journey to unveil the diverse roles of CRYAB Human Recombinant, shedding light on its structural attributes, cellular interactions, and its implications in health and disease. By delving into the properties of CRYAB, scientists aim to deepen our understanding of cellular proteostasis and	

explore novel avenues in the treatment of protein misfolding disorders. Structural Insights into CRYAB Human Recombinant: CRYAB, forming oligomeric complexes, possesses a dynamic structural configuration crucial for its chaperone function. The human recombinant form, designed for controlled study, provides a unique window into the three-dimensional intricacies of CRYAB. Understanding its structure is fundamental for deciphering how CRYAB engages with client proteins, preventing their aggregation and maintaining cellular proteostasis. Cellular Functions in Proteostasis: As a molecular chaperone, CRYAB plays a pivotal role in preserving cellular proteostasis by preventing the aggregation of misfolded proteins. Beyond its chaperone function, CRYAB is implicated in diverse cellular processes, including modulation of apoptosis, regulation of cytoskeletal dynamics, and participation in cell signaling pathways. Elucidating the multifaceted functions of CRYAB Human Recombinant provides insights into its roles in health and disease. Implications in Neurodegenerative Disorders: CRYAB has garnered attention in the context of neurodegenerative disorders, where protein misfolding and aggregation are central pathological features. Studies involving CRYAB Human Recombinant have revealed its neuroprotective properties, suggesting its potential as a therapeutic target for conditions like Alzheimer's and Parkinson's diseases. Understanding the mechanisms by which CRYAB mitigates protein aggregation in neuronal cells holds promise for developing targeted interventions. CRYAB in Cardiovascular Health: The chaperone function of CRYAB extends to the cardiovascular system, where it safeguards against protein aggregation in cardiomyocytes. CRYAB Human Recombinant studies have illuminated its protective role in cardiac tissues, positioning it as a potential therapeutic avenue for heart diseases characterized by protein misfolding. Challenges and Future Directions: While the potential of CRYAB Human Recombinant in therapeutics is evident, challenges persist. Fine-tuning its applications, understanding its interactions with diverse client proteins, and exploring the intricacies of its roles in different cellular contexts are critical for translational success. Additionally, deciphering the specific mechanisms by which CRYAB contributes to the alleviation of protein misfolding disorders remains an active area of investigation. CRYAB Human Recombinant emerges as a linchpin in the cellular orchestra, orchestrating a symphony of functions vital for proteostasis. Its structural insights, diverse cellular functions, and therapeutic implications position it at the forefront of biomedical research. As researchers continue to unravel the molecular nuances of CRYAB, they not only deepen our understanding of cellular proteostasis but also pave the way for innovative treatments in neurodegenerative and cardiovascular disorders, shaping the future of precision medicine and protein folding therapeutics.

Precautions

CRYAB Human, His is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P02511)

Background

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