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

KRT18 Bovine

Cytokeratin-18 Bovine
NTP0040

Product Overview

Name	KRT18 Bovine

Description

Cytokeratin-18 Bovine

Synonyms

Keratin type I cytoskeletal 18, Cytokeratin-18, CK-18, Keratin-18, K18, KRT18,CYK18,Cell proliferation-inducing gene 46 protein.

Source

Bovine liver.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

KRT18 was lyophilized from a 1mg/ml solution containing 30mM Tris/HCl pH 8, 9M urea, 2mM EDTA, 2mM DTT and 10mM methylammonium chloride.

Stability

Store the lyophilized KRT18 between 2-8°C, do not freeze. Upon reconstitution KRT18 should be stored at -20°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Solubility

It is recommended to reconstitute the lyophilized KRT18 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Keratin-18 (K18) is an intermediate filament protein that plays a vital role in maintaining the structural integrity of epithelial cells. Extensive research has been conducted on K18 in human and murine models, shedding light on its functions and implications for various epithelial tissues. However, the study of K18 in bovine tissues is an emerging area with potential for advancing our understanding of epithelial cell biology and its applications in veterinary medicine and biotechnology. Bovine tissues, such as the liver and gastrointestinal tract, are of particular interest due to their relevance in cattle production and food safety. This research aims to provide a comprehensive exploration of K18 in

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bovine tissues, elucidating its functions, structural significance, and potential applications. The primary objective of this research is to elucidate the role of K18 in bovine tissues, particularly in maintaining the structural integrity of epithelial cells. In vitro and ex vivo experiments, utilizing bovine epithelial cell cultures and tissue specimens, will be conducted to investigate how K18 contributes to cellular morphology, cytoskeletal organization, and tissue resilience. Understanding these mechanisms is fundamental for deciphering the complexities of epithelial cell biology in bovine species. The second objective is to assess the relevance of bovine K18 in veterinary medicine and cattle production. Studies involving bovine models will be conducted to evaluate the impact of K18 mutations or variations on tissue health, disease susceptibility, and meat quality. These investigations may provide valuable insights into potential applications in cattle breeding and food safety. The third objective is to explore the potential biotechnological applications of bovine K18. Research will investigate the use of K18-expressing bovine cells as models for studying epithelial-related diseases and for developing tissue engineering approaches for veterinary medicine and biotechnology. By delving into the functions and roles of K18 in bovine tissues, this research aims to expand our knowledge of epithelial cell biology, its implications for veterinary medicine, and its potential applications in biotechnology and cattle production.

Precautions

KRT18 Bovine is for research use only and not for use in diagnostic or therapeutic procedures.

Background

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