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GFAP Bovine

Glial Fibrillary Acidic Protein Bovine
NTP0033

Product Overview

Name	GFAP Bovine
Description	
Glial Fibrillary Acidic Protein Bovine	
Accession (Primary)	Q28115
Synonyms	
Glial fibrillary acidic protein, GFAP.	
Source	
Bovine spinal cord.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
GFAP was lyophilized from a 1mg/ml solution containing 10mM sodium phosphate buffer pH 7.5, 6M urea, 1mM EDTA, 2mM DTT and 10mM methylammonium chloride.	
Stability	
Store the lyophilized GFAP between 2-8°C, do not freeze. Upon reconstitution GFAP 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 GFAP in sterile 18MΩ-cm H 2 O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.	
Background	
Glial fibrillary acidic protein (GFAP) is a key intermediate filament protein found predominantly in astrocytes, a type of glial cell in the central nervous system. While extensive research has been conducted on GFAP in rodents and humans, the study of GFAP in bovine brain tissue is an emerging area with potential for advancing our understanding of astrocytic function and neurological health in larger mammals. Bovine brains provide a unique model system due to their size and complexity, making them valuable for investigating astrocyte-specific functions. This research aims to provide a comprehensive exploration of GFAP in bovine brain tissue, shedding light on its functions and implications	

for neurological health. The primary objective of this research is to elucidate the role of GFAP in bovine brain tissue, particularly in astrocyte structure and function. In vitro and ex vivo experiments, utilizing bovine astrocyte cultures and brain tissue slices, will be conducted to investigate how GFAP contributes to astrocytic morphology, intracellular signaling, and response to neuronal injury or disease. Understanding these mechanisms is fundamental for deciphering the complexities of astrocyte biology in large mammalian brains. The second objective is to assess the relevance of bovine GFAP in neurodegenerative diseases and brain injuries. Studies involving bovine brain models of neurodegenerative conditions such as Alzheimer's disease or traumatic brain injury will be conducted to evaluate the role of GFAP in disease progression, neuroinflammation, and tissue repair. These investigations may provide valuable insights into potential therapeutic strategies for neurological disorders. The third objective is to explore the potential applications of bovine GFAP in biotechnology and medical research. Research will investigate the use of bovine astrocyte cultures as models for studying astrocyte-neuron interactions and for developing tissue engineering approaches for neurological repair and regeneration. By delving into the functions and roles of GFAP in bovine brain tissue, this research aims to expand our knowledge of astrocyte biology, its implications for neurological health, and its potential applications in biotechnology and medical research.

Precautions

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

Target Information: (Q28115)

Background

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