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

NEFL Bovine

Neurofilament Light Bovine
NTP0045

Product Overview

Name	NEFL Bovine

Description

Neurofilament Light Bovine

Synonyms

Neurofilament light polypeptide, NF-L, NEFL, NF68, NFL, 68 kDa neurofilament protein.

Source

Bovine spinal cord.

Physical Appearance

Filtered White lyophilized (freeze-dried) powder.

Formulation

NEFL 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 NEFL between 2-8°C, do not freeze. Upon reconstitution NEFL 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 NEFL in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Neurofilament light chain (NEFL) is a critical component of the neuronal cytoskeleton, primarily found in neurons of the central and peripheral nervous systems. While extensive research has been conducted on NEFL in human and rodent models, the study of NEFL in bovine nervous tissues is an emerging area with potential for advancing our understanding of neuronal biology in larger mammals and its applications in veterinary medicine and neurobiology. Bovine nervous tissues, such as the brain and spinal cord, are of particular interest due to their relevance in cattle health and the food industry. This research aims to provide a comprehensive exploration of NEFL in bovine nervous tissues, elucidating its functions, structural significance, and potential applications. The primary objective of this

research is to elucidate the role of NEFL in bovine nervous tissues, particularly in maintaining the structural integrity of neurons and axons. In vitro and ex vivo experiments, utilizing bovine neuronal cell cultures and tissue specimens, will be conducted to investigate how NEFL contributes to neuronal morphology, axonal transport, and neuronal resilience. Understanding these mechanisms is fundamental for deciphering the complexities of neuronal biology in bovine species. The second objective is to assess the relevance of bovine NEFL in veterinary medicine. Studies involving bovine models will be conducted to evaluate the impact of NEFL mutations or variations on neuronal health, disease susceptibility, and neurodegenerative conditions. These investigations may provide valuable insights into potential applications in cattle health and the development of diagnostic tools for neurological disorders. The third objective is to explore the potential applications of bovine NEFL in neurobiology and biotechnology. Research will investigate the use of bovine NEFL-expressing cells as models for studying neuronal-related diseases and for developing tissue engineering approaches for veterinary medicine and biotechnology. By delving into the functions and roles of NEFL in bovine nervous tissues, this research aims to expand our knowledge of neuronal biology, its implications for veterinary medicine, and its potential applications in neurobiology and cattle health

Precautions

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

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