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

Parvovirus VP2

Parvovirus VP2 Canine Recombinant
VAG0416

Product Overview

Name	Parvovirus VP2

Description

Parvovirus VP2 Canine Recombinant

Source

Sf9 insect cells.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Parvovirus VP2 was lyophilized from 30mM NaCl, 20mM Na-phosphate, pH 7.4, 0.01% Tween 20 and 10% trehalose.

Stability

Lyophilized Parvovirus VP2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Parvovirus VP2 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 90.0% as determined by SDS-PAGE.

Solubility

It is recommended to reconstitute the lyophilized Parvovirus VP2 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Parvoviruses, small single-stranded DNA viruses, are known for their remarkable stability and diverse host range, causing infections in various animals, including humans. One of the key structural proteins in parvoviruses is VP2, a capsid protein responsible for viral entry and immune recognition. The study of Parvovirus VP2 Recombinant Protein has opened avenues for unraveling the intricacies of viral pathogenesis, host interactions, and has even spurred the development of innovative antiviral therapeutics. This research delves into the significance of Parvovirus VP2 Recombinant Protein, exploring its structural characteristics, functional roles, and its implications in both virology and therapeutic research. Structural Insights into VP2 Protein: VP2, forming the viral capsid, is pivotal for parvovirus infectivity. Its unique structural features, including distinct domains responsible for receptor binding and viral entry,

provide valuable insights into the viral lifecycle. Understanding the three-dimensional structure of VP2, both in its native form and as a recombinant protein, sheds light on viral assembly, stability, and the mechanisms behind host specificity. Functional Roles in Viral Pathogenesis: VP2 plays a central role in determining tissue tropism and immune recognition. Its interactions with host cell receptors influence viral entry, replication, and spread. Additionally, VP2 is a target for neutralizing antibodies, making it a key player in the host immune response. By deciphering VP2's functions, researchers gain crucial knowledge about parvovirus pathogenesis, aiding in the development of antiviral strategies and vaccines. VP2 Recombinant Protein as a Research Tool: Recombinant VP2 proteins serve as invaluable tools in virological research. They enable scientists to study viral entry mechanisms, receptor interactions, and immune responses in a controlled laboratory setting. Utilizing VP2 recombinant proteins, researchers can investigate antiviral compounds, study the efficacy of potential vaccines, and explore the dynamics of parvovirus-host interactions, contributing significantly to our understanding of viral infections. Therapeutic Implications and Vaccine Development: Parvovirus VP2 has emerged as a promising target for antiviral drug development. By disrupting VP2 interactions with host receptors, researchers are exploring novel therapeutic interventions to inhibit viral entry and replication. Furthermore, insights into VP2 immunogenicity have paved the way for the development of vaccines that trigger robust immune responses against parvovirus infections, offering hope for the prevention and control of these diseases. Parvovirus VP2 Recombinant Protein, with its pivotal roles in viral pathogenesis and host interactions, has become a cornerstone in parvovirus research. Its structural intricacies, functional significance, and potential therapeutic applications underscore its importance in both basic virology and drug discovery. As our understanding of VP2 continues to expand, it holds the promise of not only unraveling the mysteries of parvovirus infections but also guiding the development of innovative antiviral therapies, ultimately benefiting both human and animal health.

Precautions

Parvovirus VP2 is for research use only and not for use in diagnostic or therapeutic procedures.

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