

Recombinant Human Coronavirus NL63 Nucleoprotein, His-tagged

Cat. No. HUM-303 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Human Coronavirus NL63 nucleoprotein is a recombinant protein containing the full-length HCoV-NL63 nucleocapsid, cloned and expressed in *E. coli* with a C-terminal His-tag, and purified by affinity chromatography.

Tag

His

Background

Coronaviruses are species of virus belonging to the subfamily Coronavirinae in the family Coronaviridae, in the order Nidovirales. They are enveloped viruses with positive-stranded, capped, and polyadenylated RNA genomes ranging in size from 28 to 32 kb. Human coronavirus NL63 (HCoV-NL63) is a species of Alphacoronavirus that was identified in late 2004 in a seven-month-old child with bronchiolitis in the Netherlands. Infection with the virus has been confirmed worldwide, and has an association with many common symptoms and diseases. Associated diseases include mild to moderate upper respiratory tract infections, severe lower respiratory tract infection, croup and bronchiolitis. The virus is found primarily in young children, the elderly, and immunocompromised patients with acute respiratory illness. It also has a seasonal association in temperate climates.

During virus replication, a variety of proteins are synthesised including the viral RNA binding protein, nucleoprotein (N or nucleocapsid protein), a multi-functional protein with roles in both the virus life cycle and modulating host cell function. One of the key functions of the N protein is to bind viral RNA and selectively incorporate it into virus particles. The genome RNA is complexed with the basic nucleocapsid (N) protein to form a helical capsid found within the viral membrane. The nucleocapsid proteins of

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coronaviruses representing groups I, II, and III have been shown to localize to the nucleolus as well as to the cytoplasm suggesting that N protein induces a cell cycle delay or arrest, most likely in the G2/M phase, possibly by inhibition of cytokines (Weiss and Navas-Martin, 2005).

Formulation

Presented in 20mM sodium phosphate, 25mM potassium carbonate, 150mM NaCl pH10.5.

Applications

For use in ELISA and other immunoassays.

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type

Recombinant

ClassID 1

Infectious Disease

GENE INFORMATION**Synonyms**

Human Coronavirus NL63 Nucleoprotein

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