Recombinant Canine Distemper Virus Nucleocapsid Protein, His-tagged

DAG2363  Canine distemper virus (CDV)
Lot. No. (See product label)

PRODUCT INFORMATION

**Product overview**  
C-terminal 6xHis tagged nucleocapsid protein N [Canine distemper virus strain Ondersteopoort] protein (a.a. 1-523) (Genebank Accession No. AAK54665).

**Antigen Description**  
Encapsidates the negative strand viral RNA, protecting it from nucleases. The encapsidated genomic RNA is termed the ribonucleoprotein (RNP) and serves as template for transcription and replication. The RNP needs to be localized in the nucleus to start an infectious cycle, but is too large to diffuse through the nuclear pore complex. NP comprises at least 2 nuclear localization signals and is responsible of the active RNP import into the nucleus through the cellular importin alpha/beta pathway. Later in the infection, nucleus export of RNP are mediated through viral proteins NEP interacting with M1 which binds nucleoproteins. It is possible that the nucleoprotein binds directly exportin-1 (XPO1) and plays an active role in RNP nuclear export. M1 interaction with RNP seems to hide nucleoprotein's nuclear localization signals. Soon after a virion infects a new cell, M1 dissociates from the RNP under acidification of the virion driven by M2 protein. Dissociation of M1 from RNP unmask nucleoprotein's nuclear localization signals, targeting the RNP to the nucleus.

**Source**  
E. coli

**Species**  
Canine distemper virus (CDV)

**Tag**  
His

**Form**  
Each vial contains 100 µg of lyophilized protein in PBS with 8M Urea.

**AA Sequence**  
a.a. 1-523

**Purity**  
>95%, based on SDS PAGE

**Applications**  
WB standard, antibody ELISA, immunogen, etc.

PACKAGING

**Storage**  
Before reconstitution, stable for 1 year at -20°C from the date of shipment. After reconstitution, stable for a month at 4°C. Nonhazardous. No MSDS required.

**Concentration**  
N/A

**Dilutions**  
with 100 µl of Millipore water.

BACKGROUND

**Introduction**  
Canine distemper is a viral disease that affects animals in the families Canidae, Mustelidae, Mephitidae, Hyaenidae, Ailuridae, Procyonidae, Pinnipedia, some Viverridae and Felidae (though not domestic cats; feline distemper or panleukopenia is a different virus exclusive to cats). It is most commonly associated with domestic animals such as dogs and ferrets, although it can infect wild animals as well. It is a single-stranded RNA virus of the family paramyxovirus, and thus a close relative of measles and rinderpest. Despite extensive vaccination in many regions, it remains a major disease of dogs.

**Keywords**  
nucleocapsid protein N; NP; Nucleocapsid protein; Nucleoprotein; Protein N; CDV; Mononegavirales; Paramyxoviridae; Morbillivirus; Canine Distemper Virus; Group V

REFERENCES