

## Nucleoprotein/NP Protein, HCoV (YP\_173242, His)

Cat. No.:	HY-P76977
Synonyms:	Human coronavirus (HCoV-HKU1) Nucleoprotein / NP Protein (His)
Species:	Virus
Source:	E. coli
Accession:	YP_173242 (M1-A441)
Gene ID:	3200423
Molecular Weight:	Approximately 43.21 kDa.

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 40 mM PB, 500 mM NaCl, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>HCoV-HKU1 Nucleoprotein (NP, N) is a homodimer composed of 441 amino acids in each chain. NP can be divided into two structural domains interspersed with disordered (unstructured) regions: the N-terminal domain (NTD; also called RBD) serves as a putative RNA-binding domain, while the C-terminal domain (CTD; also called DD) is a dimerization domain, both the NTD and the CTD bind to nucleic acids through electropositive regions on their surfaces.</p> <p>NP is one of the most abundant coronavirus proteins with nonspecific binding activity toward nucleic acids, including ssRNA, single-stranded DNA, and double-stranded DNA, NP can also act as an RNA chaperone. NP packages the positive strand viral genome RNA into a helical ribonucleocapsid (RNP) and plays a fundamental role during virion assembly through its interactions with the viral genome and membrane protein M. NP plays an important role in enhancing the efficiency of subgenomic viral RNA transcription as well as viral replication<sup>[1]</sup>.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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