Miltenyi Biotec

Recombinant SARS-CoV-2 Nucleoprotein (HEK)

Contents

1. Description
   - 1.1 Background information
   - 1.2 Applications

1. Description

Products Recombinant SARS-CoV-2 Nucleoprotein (HEK) or
Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin.

Productname	Content	Order no.
Recombinant SARS-CoV-2 Nucleoprotein (HEK)	25 µg	130-127-462
Recombinant SARS-CoV-2 Nucleoprotein (HEK)	100 µg	130-127-517
Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin	10 µg	130-127-454
Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin	50 µg	130-127-467

Functional testing Binding of Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin to a SARS-CoV-2 nucleoprotein-specific antibody by ELISA.

Primary structure Recombinant SARS-CoV-2 Nucleoprotein (HEK):
Single polypeptide chain (452 amino acid residues) without N-terminal methionine. C-terminal His-tag and AviTag™.

Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin:
Monobiotinylated polypeptide chain (452 amino acid residues) without N-terminal methionine. C-terminal His-tag and AviTag.

Molecular mass 49.1 kDa.

Source Produced in human embryonic kidney cells.

Product format Lyophilized from a filtered (0.2 µm) buffer solution.

Stabilizer Mannitol and trehalose.

Purity >90% as determined by SDS-PAGE analysis.

Endotoxin level Low endotoxin (<0.1 EU/µg protein) as determined by Limulus Amebocyte Lysate (LAL) assay.

Storage Lyophilized Recombinant SARS-CoV-2 Nucleoprotein (HEK) should be stored at –20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at –20 °C or below. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended to reconstitute lyophilized Recombinant SARS-CoV-2 Nucleoprotein (HEK) with deionized, sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 100 µL.

1.1 Background information

The Recombinant SARS-CoV-2 Nucleoprotein (HEK) (also known as nucleocapsid protein or protein N) is highly immunogenic and represents a crucial structural molecule of the SARS-CoV-2 virus. The N-terminal RNA-binding domain (NTD) associates with the viral genome of SARS-CoV-2. An intrinsically disordered stretch connects the NTD domain with the C-terminal dimerization domain (CTD). A major function of the nucleocapsid protein is the packaging of the viral genome into helical nucleocapsid structures.
The recombinant SARS-CoV-2 nucleoprotein covers the full length protein (amino acids S2–A419) and contains a His-tag and an AviTag.
Recombinant SARS-CoV-2 Nucleoprotein (HEK)-Biotin is specifically biotinylated at a single site, preserving the full functionality of the protein.

1.2 Applications

The product can be used for a variety of applications, including:

- Analysis of SARS-CoV-2 immune responses
- Detection and characterization of SARS-CoV-2-specific antibodies
- Studying SARS-CoV-2 cell binding, infection, and viral life cycle

The optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to **www.miltenyibiotec.com** for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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