

Recombinant SARS-CoV-2 RdRp/NSP7/NSP8 Complex Protein, FLAG/His/His-tagged

Cat. No. RdRp-02S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The RdRp (RNA dependent RNA polymerase) complex is a complex of the three SARS-CoV-2 proteins NSP7, NSP8 and RNA polymerase/NSP12, reconstituted from the affinity-purified recombinant proteins. Recombinant SARS-CoV-2 RNA polymerase/NSP12, full length encompassing amino acids 1-932 (end), contains an N-terminal FLAG-tag. Recombinant SARS-CoV-2 NSP7, full length encompassing amino acids 1-84 (end), contains a C-terminal His-tag (6xHis). Recombinant SARS-CoV-2 NSP8, full length encompassing amino acids 1-198 (end), also contains a C-terminal His-tag (6xHis).
Species	SARS-CoV-2
Source	RdRp: HEK293; NSP7: E. coli; NSP8: E. coli
ProteinLength	RdRp: 1-932(end); NSP7: 1-84(end); NSP8: 1-198(end)
Description	Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped, positive-sense, single-stranded RNA virus that causes coronavirus disease 2019 (COVID-19). Virus particles include the RNA genetic material and structural proteins needed for invasion of host cells. Once inside the cell the infecting RNA is used to encode structural proteins that make up virus particles, nonstructural proteins that direct virus assembly, transcription, replication and host control and accessory proteins whose function has not been determined.~ ORF1ab, the largest gene, contains overlapping open reading frames that encode polyproteins PP1ab and

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PP1a. The polyproteins are cleaved to yield 16 nonstructural proteins, NSP1-16. Production of the longer (PP1ab) or shorter protein (PP1a) depends on a -1 ribosomal frameshifting event. The proteins, based on similarity to other coronaviruses, include the papain-like proteinase protein (NSP3), 3C-like proteinase (NSP5), RNA-dependent RNA polymerase (NSP12, RdRp), helicase (NSP13, HEL), endoRNase (NSP15), 2'-O-Ribose-Methyltransferase (NSP16) and other nonstructural proteins. SARS-CoV-2 nonstructural proteins are responsible for viral transcription, replication, proteolytic processing, suppression of host immune responses and suppression of host gene expression. The RNA-dependent RNA polymerase is a target of antiviral therapies.

Form	45 mM Tris-HCl, pH 8.0, 124 mM NaCl, 2.4 mM KCl, 4 mM MgCl ₂ , 1 mM TCEP, and 10% glycerol.
Molecular Mass	RdRp: 108 kDa; NSP7: 10 kDa; NSP8: 23 kDa
Purity	≥90%
Applications	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
Stability	At least 6 months at -80 centigrade. Avoid freeze/thaw cycles.
Storage	-80 centigrade
Concentration	1.14 mg/ml
Reconstitution	RdRp (FLAG-1-932(end)) / NSP7 (1-84(end)-His) / NSP8 (1-198(end)-His)
Shipping	-80 centigrade
Warning	Avoid freeze/thaw cycles.

tmpcolumn67 ORF1a polyprotein; ORF1ab polyprotein

GENE INFORMATION

Gene Name ORF1ab ORF1a polyprotein;ORF1ab polyprotein [Severe acute respiratory syndrome coronavirus 2]

Official Symbol ORF1ab

Synonyms RdRP; RDR; RNA replicase; SARS-coronavirus RNA polymerase; nsp12; nonstructural protein 8; SARS-CoV-2 NSP8; ncov NSP8; NSP 8; NSP-8; nonstructural protein 7; SARS-CoV-2 NSP7; ncov NSP7; NSP 7; NSP-7

Gene ID 43740578

Protein Refseq YP_009725307

UniProt ID A0A6B9V049

RdRp Activity

SDS-PAGE 4-20% SDS-Page Coomassie Staining.

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