



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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- Trockeneiszuschlag
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- Expressversand

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# PRODUCT INFORMATION



## SARS-CoV-2 nsp10 (recombinant)

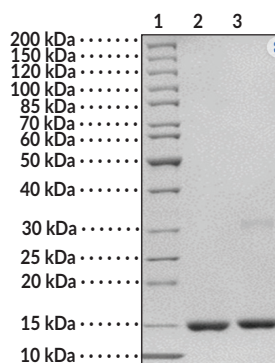
Item No. 40883

### Overview and Properties

<b>Synonyms:</b>	SARS-CoV-2 Non-structural Protein 10, Severe Acute Respiratory Syndrome Coronavirus 2 nsp10
<b>Source:</b>	Recombinant SARS-CoV-2 N-terminal His-tagged nsp10 expressed in <i>E. coli</i>
<b>Amino Acids:</b>	1-139 (full length)
<b>Uniprot No.:</b>	PODTD1
<b>Storage:</b>	-80°C (as supplied); avoid repeated freeze/thaw cycles
<b>Stability:</b>	≥1 year
<b>Purity:</b>	≥90%
<b>Supplied in:</b>	50 mM Tris-HCl, pH 7.5, with 200 mM sodium chloride and 20% glycerol
<b>Endotoxin Testing:</b>	< 1.0 EU/μg, determined by the LAL endotoxin assay
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: SARS-CoV-2 nsp10 (2 μg)  
Lane 3: SARS-CoV-2 nsp10 (10 μg)

SDS-PAGE Analysis of SARS-CoV-2 nsp10

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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# PRODUCT INFORMATION



## Description

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped positive-stranded RNA virus and the causative agent of COVID-19, a primarily respiratory illness characterized by fever, cough, and shortness of breath that can lead to life-threatening complications.<sup>1-5</sup> The SARS-CoV-2 genome contains approximately 30 kilobases and 14 open reading frames (ORFs) that encode four structural proteins: spike, envelope, membrane, and nucleocapsid, as well as 16 non-structural proteins and 9 accessory factors.<sup>6</sup> SARS-CoV-2 non-structural protein 10 (nsp10) is encoded within *ORF1ab* and is a cofactor for guanine-N7 methyltransferase (guanine-N7 MTase) and 2'-O-methyltransferase (2'-O-MTase).<sup>6-8</sup> The amino acid sequence of nsp10 displays few mutations and is highly conserved across SARS-CoV-2 variants.<sup>7</sup> SARS-CoV-2 nsp10 binds to and stabilizes the disordered N-terminal exoribonuclease domain (ExoN domain) of guanine-N7 MTase and is necessary for accurate exonuclease activity.<sup>7</sup> It forms a complex with 2'-O-MTase to methylate nascent mRNAs at the ribose 2'-O position, creating a Cap-1 structure that facilitates increased translation of viral mRNAs and reduced innate immune recognition by the host cell.<sup>8</sup>

## References

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1. Kandeel, M., Ibrahim, A., Fayez, M., *et al.* From SARS and MERS CoVs to SARS-CoV-2: Moving toward more biased codon usage in viral structural and nonstructural genes. *J. Med. Virol.* **92(6)**, 660-666 (2020).
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