



LD Biopharma, Inc.
7384 Trade Street, Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant sfGFP-SARS-CoV-2 **ORF10** Fusion Protein
Catalog Number: VRP-3077
Manufacturer: LD Biopharma, Inc. USA

Introduction

Coronaviruses are a group of enveloped positive-stranded RNA viruses that consist of four structural proteins including spike (S) glycoprotein, envelope (E) protein, membrane (M) protein, and nucleocapsid (N) protein. The **Orf10** of SARS-CoV is 38aa protein which may hijack host cell ubiquitination pathways for replication and pathogenesis. The novel Orf10 of SARS-CoV-2 interacts with members of a Cullin 2 (CUL2) RING E3 ligase complex, specifically the CUL2ZYG11B complex.

Full-length SARS-coV2 viral **ORF10** cDNA (37aa) was constructed with codon optimization gene synthesis and expressed with a SuperGFP Protein N-terminal (sfGFP; 257aa) fusion at target protein N-terminal in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: SARS-Cov2 **ORF10**
Accession Number: QHI42199.1
Species: Coronavirus
Size: 30 µg / Vial
Composition: 0.3 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Davld E. Gordon.et al., **A SARS-CoV-2 protein interaction map reveals targets for drug repurposing.** *Nature* <https://doi.org/10.1038/s41586-020-2286-9> (2020)



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Wu, F. et al., 2020: *A new coronavirus associated with human respiratory disease in China.*
Nature 579(7798): 265-269.

Applications

1. May be used for SARS-CoV2 ORF10 protein-protein interaction assay.
2. As native SARS-CoV2 ORF10 immunogen for its specific antibody production.

Quality Control

- Purity: > 93 % by SDS-PAGE.
- SuperGFP protein: [Ex λ](#) = 485, and [Em λ](#) = 510.
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Recombinant **sfGFP**- SARS_CoV2 ORF10 Protein Sequence (33.2 kD)

MKHHHHHQVSKGEELFTGVVPILEVELDGDVNGHKFSVRGEGEGDATNGKLTTLKFICTTGKLPV
PWPTLVTTLTLYGVQCFSRYPDHMKRHDFKSSAMPEGYVQERTISFKDDGTYKTRAEVKFECDTL
VNRIELKGIDFKEDGNILGHKLEYNFNHNVYITADKQKNGIKANFKIRHNVEDGSVQLADHYQ
QNTPIGDGPVLLPDNHYLSTQSVLSKDPNEKRDHMLLEFVTAAGITHGMDELYKSGLRSGGSG
GGEGYINVFAPFTIYSLLLCRMNSRNYIAQVDVVNFNLT