

CoV Protease Substrate-1 TF5



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

FRET-based peptide substrate for detection of protease activity of coronaviruses

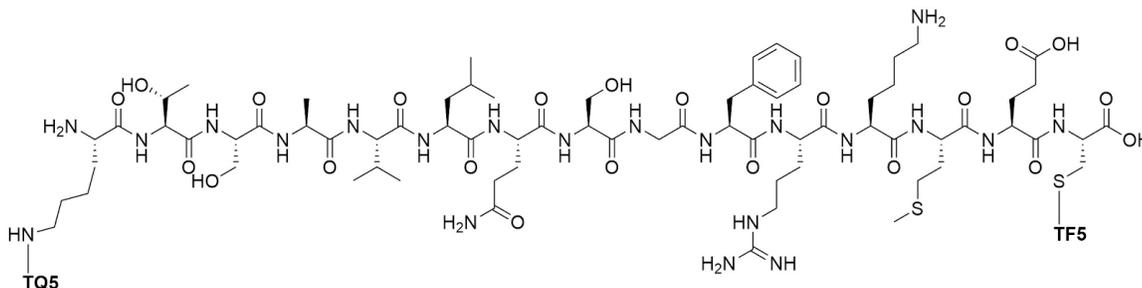
Catalog #100-0505 100 Tests
100-0506 1000 Tests

Product Description

The coronavirus (CoV) main protease, also called 3CL^{pro}, regulates the CoV replication complex and is a potential target for therapeutic applications. CoV Protease Substrate-1 TF5 is a fluorescence resonance energy transfer (FRET)-based peptide that can be cleaved by the 3CL^{pro} CoV proteases. It consists of a 14-amino-acid sequence (KTSAVLQSGFRKME) that also contains the Tide Quencher™ 5 (TQ5; quencher) and Tide Fluor™ 5 (TF5; donor) fragments at the N- and C-termini, respectively. When the peptide substrate is intact, favorable energetic overlap of the TF5 excited state and the TQ5 absorption leads to efficient intramolecular fluorescence quenching of TF5 by the TQ5 fragment. Cleavage of the substrate by CoV proteases, however, dissociates the TF5 fragment from TQ5, restoring the fluorescence of the TF5 moiety that is directly correlated to the CoV protease activity.

Product Information

Amino Acid Sequence: KTSAVLQSGFRKME
Predicted Molecular Mass: 3620.33 kDa
Excitation Wavelength: 649 nm
Emission Wavelength: 664 nm
Cutoff: 660 nm
Extinction Coefficient: 250,000 cm⁻¹M⁻¹
Purity: ≥ 95%
Formulation: Lyophilized from a dimethylformamide (DMF) solution using vacuum drying.
Structure:



Preparation and Storage

Storage: Product stable at -20°C. Protect from prolonged exposure to light.
Stability: Stable until expiry date (EXP) on label.
Preparation: Centrifuge vial before opening. Reconstitute the product in 25 µL (for Catalog #100-0505) or 250 µL (for Catalog #100-0506) of DMSO. Do not vortex. Prepare single-use aliquots and store at -20°C. Avoid repeated freeze-thaw cycles.

Directions For Use

To make a working solution, dilute 1 in 200 in 20 mM Tris buffer (pH 7.5) or buffer of your choice. Use 50 µL of substrate solution per assay in a 96-well plate. Use as directed in protocol of choice.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2020 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. Tide Fluor and Tide Quencher are trademarks of AAT Bioquest Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.