

**DESCRIPTION**

<b>Species Reactivity</b>	SARS-CoV-2
<b>Specificity</b>	Detects human SARS2-CoV-2 Envelope in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 1044554
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human SARS2-CoV-2 Envelope Thr35-Val75 Accession # YP_009724392
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

<b>Immunocytochemistry</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Immunohistochemistry</b>	Optimal dilution of this antibody should be experimentally determined.

**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

**BACKGROUND**

The SARS-CoV-2 Envelope protein is one of the four major structural proteins of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the causative agent of COVID-19 (1). The envelope protein is the smallest of the four structural proteins, which also includes the membrane protein, spike protein, and nucleocapsid protein (1, 2). The envelope protein is synthesized as a 75 amino acid protein with a theoretical molecular weight of approximately 8.4 kDa (2, 3). Furthermore, the envelope protein of SARS-CoV-2 has 94.7% sequence identity and 97.4% sequence similarity to the envelope protein of SARS-CoV (2). Structurally, the envelope protein is a membrane protein with a N-terminal domain, an alpha-helical transmembrane domain, and a hydrophilic C-terminal domain (1, 4). The envelope protein has multiple functions in viral replication including viral assembly, release, and pathogenesis (2, 4). Additionally, the SARS-CoV-2 envelope protein has ion channel activity and functions as a viroporin with a role in virion trafficking (2,4). Coronaviruses lacking the envelope protein are shown to have reduced viral titer and slowed or defective maturation, indicative of a role in virus production and growth (4).

**PRODUCT SPECIFIC NOTICES**

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