

Recombinant Human CD147 Protein, hFc-tagged

Cat. No. HUM-293 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CD147 (22-205) was expressed in CHO cells using a C-terminal Fc-tag and binds to the SARS Coronavirus 2 (COVID-19) receptor binding domain (RBD).
Tag	Fc
Background	CD147 (also known as Basigin or EMMPRIN) is a highly glycosylated transmembrane protein which belongs to the immunoglobulin superfamily and acts as the main upstream stimulator of matrix metalloproteinases (MMPs) (Kong et al., 2014). It is present in multiple cellular types in lung and highly expressed in type II pneumocytes and macrophages at the edges of the fibrotic zones (Guillot et al., 2006). Expression levels of CD147 and MMPs are often increased in tumor tissue, inflammation and pathogenically infected cells and is associated with cancer progression (Mattos et al., 2002). Patients with severe asthma have high levels of MMP-9 in sputum and influenza A virus infection increases CD147 expression in cells from asthmatics (Moheimani et al., 2018). CD147 also acts as an RBC receptor for Plasmodium falciparum, a Malarial protozoan (Wang et al., 2020). Cyclophilin A (CyPA) is a ubiquitously distributed cellular protein and is thought to assist protein folding and to function as a chaperone. It can be integrated with virions of some viruses, including HIV-1 and vaccinia virus and plays a role in viral invasion or replication. CD147 is a receptor for CyPA and contributes to viral infection or inflammation. SARS-CoV nucleocapsid (N) protein bound to CyPA has been shown to interact with a member of the CD147 family (Chen et al., 2005). SARS-CoV-2 invades host cells via two receptors, angiotensin-converting enzyme 2 (ACE2) and

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

CD147. The virus Spike protein (S) binds to ACE2 or CD147 on the host cell, mediating viral invasion and dissemination of virus among other cells. CD147 therefore plays a functional role in mediating the viral invasion of the host cell. It therefore provides a key target for the development and administration of specific anti-SARS-CoV-2 receptor blocking drugs and may offer a novel therapeutic strategy against viral invasion (Ulrich & Pillat, 2020).

Purity greater than 90% purity, as measured by densitometry.

Formulation 50mM Tris-HCl, pH7.5, 90mM Glycine.

Notes This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type Recombinant

ClassID 1 Infectious Disease

GENE INFORMATION

Synonyms CD147

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