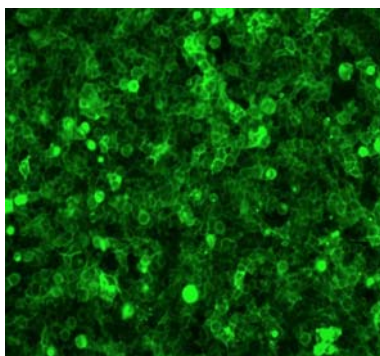


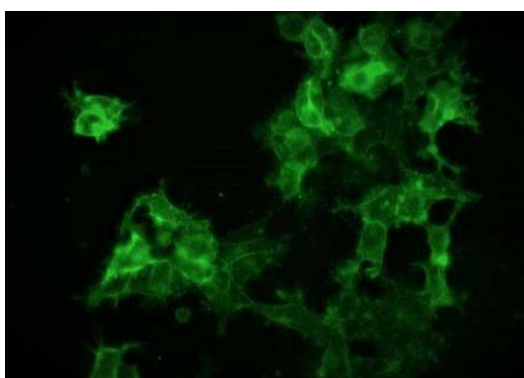
- GREEN FLUORESCENT ACE2 HEK293 STABLE CELL LINE -



|                        |   |
|------------------------|---|
| <b>Product Name:</b>   | ACE2-tGFP HEK293 cell line                      |
| <b>Catalog Number:</b> | P30903  |
| <b>Cell Line:</b>      | HEK293  |
| <b>Resistance:</b>     | Puromycin                                       |
| <b>Format:</b>         | >3x10 <sup>6</sup> cells in Cryopreserved vials |
| <b>Storage:</b>        | Liquid Nitrogen                                 |

 **ACE2-tGFP HEK293 cell line**

The ACE2-tGFP HEK293 cell line has been developed by stable transfection with a human Angiotensin-converting enzyme 2 (hACE2) receptor expression plasmid tagged with turboGFP. hACE2-tGFP HEK293 cell line provides consistent levels of expression of human fluorescent ACE2 protein in cells surface.



This cell line is intended to be used as an "in vitro" model for research studies.

 **ACE2 receptor and COVID-19**

ACE2 is the main host cell receptor of novel coronavirus from human airway epithelial cells named 2019-nCoV. ACE2 is the key receptor in the entry of virus into the cell to cause the final infection.

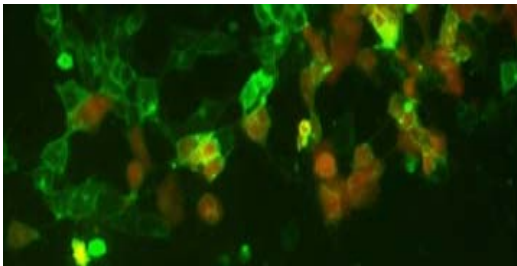
The coronaviruses use the spike glycoprotein on the envelope to bind to their cellular ACE2 receptors through their receptor binding domain (RBD).

The study of the interaction between the coronavirus and the ACE2 receptor plays a crucial role in the findings of possible therapeutic strategies to treat the COVID-19 disease.

**Bibliography:** Xu, H., Zhong, L., Deng, J. et al. High expression of ACE2 receptor of 2019-nCoV on the epithelial cells of oral mucosa. *Int J Oral Sci* 12, 8 (2020). <https://doi.org/10.1038/s41368-020-0074-x>  
Lan, J., Ge, J., Yu, J. et al. Structure of the SARS-CoV-2 spike receptor-binding domain bound to the ACE2 receptor. *Nature* (2020). <https://doi.org/10.1038/s41586-020-2180-5>

### Epifluorescence analysis and infection assay with SARS-CoV-2 Spike Glycoprotein pseudotyped lentiviral particles.

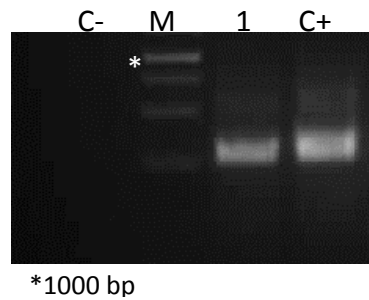
The detection of ACE2-tGFP protein in the cells surface was carried out by epifluorescence analysis. The hACE2-tGFP HEK293 has been validated for its susceptibility to being infected by SARS-COV-2. For this purpose, the cell line has been infected with lentiviral particles pseudotyped with the spike-SARS-2 protein that contain inside the genetic material for the expression of the turbo-FP602 protein. Once the virus has infected the cell, the genetic material is transferred and expressed inside the cells.



**Figure 2. In vivo Epifluorescence image of HEK293hACE2-tGFP after SARS-COV-2 Spike pseudotyped virions.** The image shows the membrane localization of the hACE2-tGFP protein in green, and the cells that have been infected by lentiviral particles pseudotyped with the Spike protein of the SARS-COV-2 virus are shown in red.

### RT-PCR analysis

The presence of ACE2 mRNA was analyzed by RT-PCR.



**Figure 1. ACE2 RT-PCR analysis.** (1) ACE2 HEK293 cell line. Positive Control (C+): ACE2 cDNA. Negative Control (C-): not transfected HEK293 cells.

### Quality Control

All cells are performance assayed and test negative for mycoplasma, bacteria, yeast and fungi. Cell viability, morphology and proliferative capacity are measured after recovery from cryopreservation. Innoprot guarantees stable expression for many generations and provides support for cell culture and visualization.

**THIS PRODUCT IS FOR RESEARCH PURPOSES ONLY.** It is not to be used for drug or diagnostic purposes, nor is it intended for human use. Innoprot products may not be resold, modified for resale, or used to manufacture commercial products without written approval of Innovative Technologies in Biological Systems, S.L.