

34-1134: Mouse monoclonal antibody to SARS-CoV2 (ACE2 binding domain) (Clone:2G1)

Clonality :	Monoclonal
Clone Name :	2G1
Application :	ICC/IF, WB
Uniprot ID :	P0DTC2
Format :	Purified
Isotype :	IgG1
Immunogen Information :	Recombinant SARS-CoV2 S-Protein ACE2 binding domain expressed in and purified from E. coli.

Description

Immunofluorescent analysis of transfected HEK293 cells with the SARS-CoV2-bd-construct under high magnification, stained with mouse mAb to SARS-CoV2-bd, dilution 1:1,000, in green. Cells were costained with rabbit pAb to HSP60, RPCA-HSP60, dilution 1:2,000, in red. The blue is Hoechst staining of nuclear DNA. This antibody reveals overexpression of SARS-CoV2-bd protein presumably in lysosomes only in transfected cells, while the HSP60 antibody labels mitochondria in all cells.

This antibody was raised against a recombinant construct of the SARS-CoV-2 spike or S-protein which includes the entire region which interacts with ACE2. The specific binding to ACE2 is essential for viral internalization and infection. We designed this construct based on amino acids 308-541 in the S-protein sequence in Isolate Wuhan-Hu-1, complete genome. This is a defined globular domain recently shown to include all of the amino acids necessary for ACE2 binding. The construct was expressed in and purified from E. coli and includes an N-terminal His-tag and other vector derived sequence shown underlined below. Amino acids which interact directly with the ACE2 protein are printed in bold.

Product Info

Amount :	50µL / 100 µL
Content :	Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3
Storage condition :	Shipped on ice. Store at 4°C for short term, for longer term at -20°C. Avoid freeze / thaw cycles.
Amino Acid :	MHHHHHSSG LVPRGSGMKE TAAKFERQH MDSPDLGTDD DDKAMADIGS EFVEKGIYQT 60 SNFRVQPTES IVRFPNITNL CPFGEVFNAT RFASVYAWNR KRISNCVADY SVLYNSASF 120 TFKCYGVSPT KLNDLCFTNV YADSFVIRGD EVRQIAPGQT GKIADYNYKL PDDFTGCVIA 180 WNSNNLDSKV GGNYNLYRL FRKSNLKPFE RDISTEIQQA GSTPCNGVEG FNCYFPLQSY 240 GFQPTNGVGY QPYRVVLSF ELLHAPATVC GPKKSTNLVK NKCVNF 286

Application Note

WB: 1:1,000-1:2,000. ICC/IF: 1:1,000

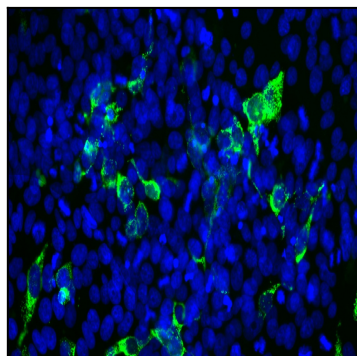


Fig 1:-Cells were transfected with the DNA encoding the S-protein segment in PROT-SARS-CoV2-bd which was inserted in the pCI-Neo-Mod expression vector (5). This antibody produces clean and specific staining of transfected cells which stain identically with RPCA-SARS-CoV2-bd, rabbit polyclonal antibody to the same immunogen. The nuclei of transfected and untransfected cells are shown in blue with DAPI DNA stain.

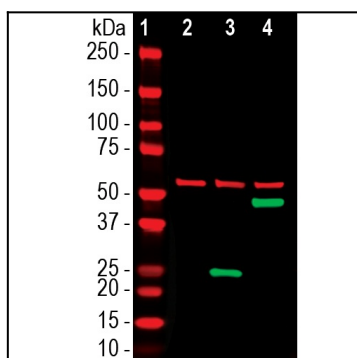


Fig 2:-Cells were transfected with DNA encoding the S-protein ACE2 binding site in PROT-SARS-CoV2-bd which was inserted into pCI-Neo-Mod or pCI-Neo-GFP eukaryotic expression vectors, which express either the insert only or the insert fused with GFP (5). Lane 1 shows a crude homogenate of untransfected control cells, lane 2 shows a homogenate of cells expressing SARS-CoV2-bd and lane 3 shows a homogenate of cells expressing GFP-SARS-CoV2-bd fusion. This antibody was used at a dilution of 1:3,000 and produces clean and specific staining of bands of the expected size as shown in green. The blot was also stained with rabbit polyclonal control antibody to HSP60, RPCA-HSP60, at a dilution of 1:5,000 in red.