

# Product Datasheet

## ACE-2 Antibody (AC384) - Azide and BSA Free NBP2-80038-100ug

Unit Size: 100 ug

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Updated 9/11/2022 v.20.1

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**NBP2-80038-100ug**

ACE-2 Antibody (AC384) - Azide and BSA Free

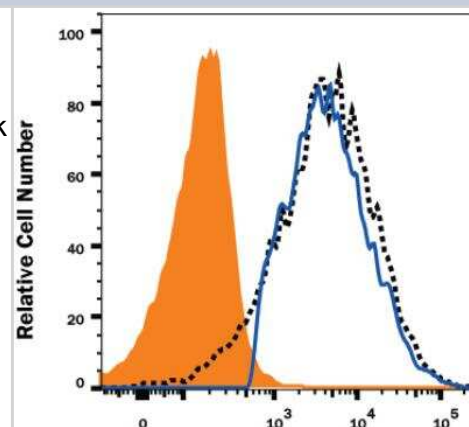
Product Information	
Unit Size	100 ug
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	AC384
Preservative	No Preservative
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	0.2 um-filtered solution in PBS, pH 7.4

Product Description	
Host	Mouse
Gene ID	59272
Gene Symbol	ACE2
Species	Human
Immunogen	Recombinant human ACE-2.

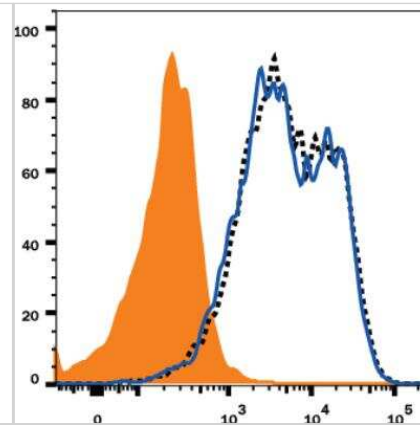
Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry
Recommended Dilutions	Western Blot 1:2000-1:10000, Flow Cytometry, ELISA 1:2000-1:1000
Application Notes	Use in Flow reported in scientific literature (PMID:34538015).

**Images**

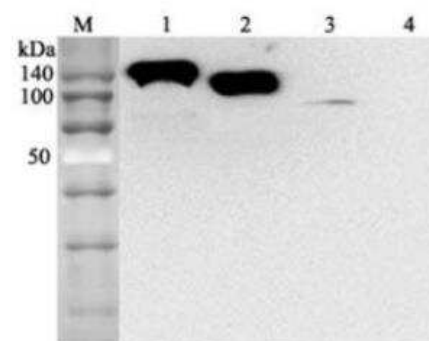
Block/Neutralize: ACE-2 Antibody (AC384) [NBP2-80038] - In a functional flow cytometry assay using a HEK293 human embryonic kidney cell line transfected with human ACE-2, 1ug/mL Fc-tagged recombinant human Spike S1 subunit RBD is shown to bind Ace-2 (black dotted line) detected by Human IgG Fc-APC Secondary Antibody (FAB110A). Binding is completely blocked (orange histogram) by 25 ug/mL of Mouse Anti-Human ACE-2 Monoclonal Antibody (NBP2-80038). 25 ug/mL Mouse Anti-Human DC-SIGN/CD209 Monoclonal Antibody (MAB161) was used as an irrelevant control (blue line).



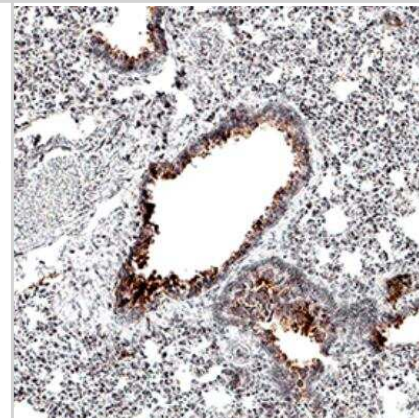
**Block/Neutralize: ACE-2 Antibody (AC384) [NBP2-80038]** - In a functional flow cytometry assay using a HEK293 human embryonic kidney cell line transfected with human ACE-2, 0.5 ug/mL sheep Fc-tagged recombinant human Spike S1 is shown to bind ACE-2 (black dotted line) detected by Donkey anti-Sheep APC Secondary Antibody (Catalog # F0127). Binding is completely blocked (orange histogram) by 25 ug/mL of Mouse Anti-Human ACE-2 Monoclonal Antibody (NBP2-80038). 25 ug/mL Mouse anti-Human DC-SIGN/CD209 Monoclonal Antibody (MAB161) was used as an irrelevant control (blue line).



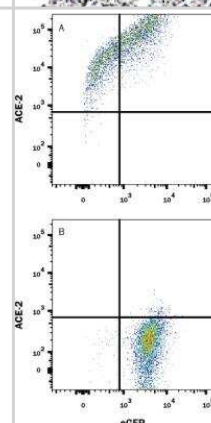
**Western Blot: ACE-2 Antibody (AC384) [NBP2-80038]** - 1: Human ACE2 Fc-fusion protein. 2: Human ACE2 (Ecto domain) (FLAG®-tagged). 3: HepG2 cell lysate. 4: Other Fc-fusion (hGITR-Fc) proteins (negative control). 1:2'000 dilution.



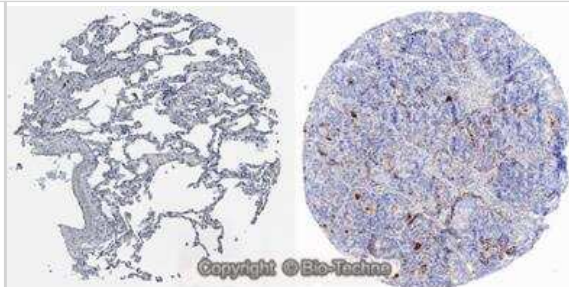
**Immunohistochemistry-Paraffin: ACE-2 Antibody (AC384) [NBP2-80038]** - ACE-2 staining in paraffin-embedded sections of hamster lung tissue using Mouse Anti-Human ACE-2 (AC384) Monoclonal Antibody (Catalog # NBP2-80038) at 10 ug/ml overnight at 4 degrees C. Detection kit: VC001. Counterstain: Hematoxylin. Localization: respiratory bronchioles.



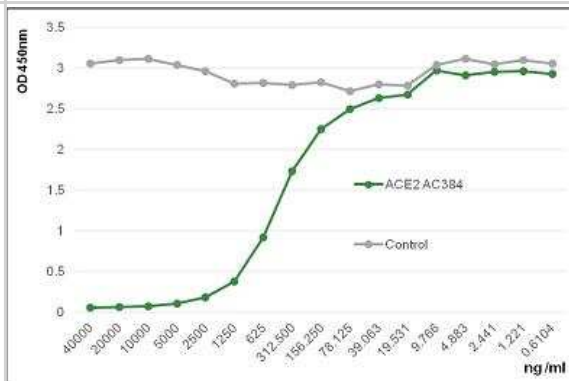
**Flow Cytometry: ACE-2 Antibody (AC384) [NBP2-80038]** - Detection of ACE-2 in HEK293 Human Cell Line Transfected with Human ACE-2 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) human ACE-2 or (B) irrelevant protein, and eGFP was stained with Mouse Anti-Human ACE-2 Monoclonal Antibody (Catalog # NBP2-80038) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on Mouse IgG1 control antibody staining (Catalog # MAB002, data not shown). View our protocol for Staining Membrane-associated Proteins.



**Immunohistochemistry-Paraffin: ACE-2 Antibody (AC384) [NBP2-80038]**  
 - ACE-2 was detected in immersion fixed paraffin-embedded sections of human lung normal (left) and lung cancer tissue (right) using Mouse Anti-Human ACE-2 (AC18F) Monoclonal Antibody (Catalog # NBP2-80038) at 15ug/mL for 1 hour at room temperature followed by incubation with the Goat anti-Mouse IgG Secondary Antibody.



**Functional: ACE-2 Antibody (AC384) [NBP2-80038]** - Binding of ACE2 (human) to the Spike protein of SARS-CoV-2 is inhibited by the antibody anti-ACE2 (human), mAb (blocking) (AC384). Spike (SARS-CoV-2):Fc (human) (RBD) (rec.) is coated on an ELISA plate at 1ug/ml. ACE2 (human), mAb (blocking) (AC384) or an unrelated mAb Control are added (starting at 40 ug/mL with a two-fold serial dilution) together with 500 ng/uL of ACE2 (human). After incubation for 1h at RT, the binding was detected using an anti-FLAG antibody (HRP).



## Publications

Fu L, Gilham D, Stotz SC et al. Dual mechanism: Epigenetic inhibitor apabetalone reduces SARS-CoV-2 Delta and Omicron variant spike binding and attenuates SARS-CoV-2 RNA induced inflammation International Immunopharmacology 2023-04-01 [PMID: 36857935] (B/N, Human)

MacGowan SA, Barton MI, Kutuzov M et al. Missense variants in human ACE2 strongly affect binding to SARS-CoV-2 Spike providing a mechanism for ACE2 mediated genetic risk in Covid-19: A case study in affinity predictions of interface variants PLoS computational biology 2022-03-01 [PMID: 35235558]

van der Sluis RM, Cham LB, Gris-Oliver A et al. TLR2 and TLR7 mediate distinct immunopathological and antiviral plasmacytoid dendritic cell responses to SARS-CoV-2 infection The EMBO journal 2022-02-17 [PMID: 35178710] (FLOW, Human)

Carter-Timofte ME, Arulanandam R, Kurmasheva N Et al. Antiviral Potential of the Antimicrobial Drug Atovaquone against SARS-CoV-2 and Emerging Variants of Concern ACS infectious diseases 2021-10-18 [PMID: 34658235] (FLOW, Human)

Barrett TJ, Bilaloglu S, Cornwell M et al. Platelets contribute to disease severity in COVID-19 Journal of thrombosis and haemostasis : JTH 2021-09-19 [PMID: 34538015] (FLOW, Human)

Macgowan S, Barton M, Kutuzov M et al. Missense variants in human ACE2 modify binding to SARS-CoV-2 Spike 2021-05-21

Tada T, Fan C, Kaur R et al. A Soluble ACE2 Microbody Protein Fused to a Single Immunoglobulin Fc Domain is a Potent Inhibitor of SARS-CoV-2 Infection Cell Rep 2020-12-16 [PMID: 33326798] (Human)



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### **Products Related to NBP2-80038-100ug**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
NBP1-76614PEP	ACE-2 Antibody Blocking Peptide

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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