9853 Pacific Heights Blvd.
Suite D. San Diego,
CA 92121, USA
Tel: 858-263-4982
Email: info@abeomics.com

29-1005-NALE: anti-ACE2 (human), mAb (blocking) (AC384) Azide free

Clonality :	Monoclonal
Clone Name :	AC384
Application :	Functional Assay,ELISA,WB
Reactivity :	Human
Uniprot ID :	Q9BYF1
Alternative Name :	anti-ACE2 (human), mAb (blocking) (AC384)
Isotype :	Mouse IgG1, k
Immunogen Information :	Recombinant human ACE2.

Description

Angiotensin-converting enzyme2 (ACE2) is an ectoenzyme (carboxypeptidase) with an extracellular catalytic domain that predominantly localizes at the plasma membrane and is thereby able to hydrolyze circulating peptides. ACE2 has approximately 42% sequence identity with ACE and its cytoplasmic and transmembrane domains show 48% homology to the protein collectrin, that plays a critical role in the amino acid absorption of the kidney. ACE2 converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. ACE2 is involved in the regulation of systemic blood pressure and has direct effects on cardiac functions. It is expressed predominantly in endothelial cells of the lung, gut, heart and kidney. ACE2 together with the protease TMPRSS2 acts as a functional receptor for SARS coronavirus as well as for the new highly pathogenic coronavirus, 2019-nCoV/SARS-CoV-2, which is cause for pneumonia COVID-19.

Product Info

Amount :	500 µg / 100 µg
Purification :	Protein G-affinity purified.
Content :	1mg/ml in PBS. Sodium Azide free
Storage condition :	Short Term Storage + 4°C; Long Term Storage -20°C; Handling Advice After opening, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles.

Application Note

ELISA: (direct or indirect: 1:2'000-1:10'000) Western blot: (1:2'000-1:10'000 using ECL. Suggested blocking and dilution buffer is PBST with 0.05% Tween 20 and 5% skim milk. Suggested incubation time is 1 hour at rooom temperature). Functional Application: Blocks the binding of human ACE2 to the Spike protein of SARS-Cov-2.

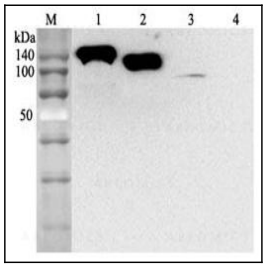

Figure 1: Binding of ACE2 (human) to the Spike protein of SARS-CoV-2 is inhibited by the antibody anti-ACE2 (human), mAb (blocking) (AC384) (29-1005). Methods: Spike (SARS-CoV-2):Fc (human) (RBD) (rec.) (32-190018) is coated on an ELISA plate at 1µg/ml. ACE2 (human), mAb (blocking) (AC384) (29-1005) or an unrelated mAb Control are added (starting at 40µg/ml with a two-fold serial dilution) together with 500ng/µl of ACE2 (human) (32-190010). After incubation for 1h at RT, the binding was detected using an anti-FLAG antibody (HRP).

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