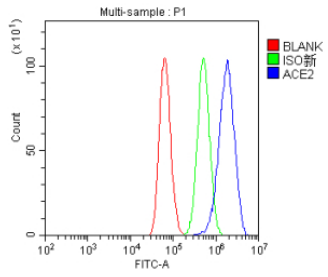
ACE2 Antibody / Angiotensin-converting enzyme 2 (FY12414)

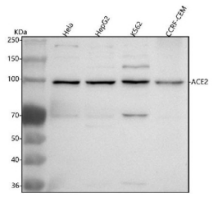
Catalog No.	Formulation	Size
FY12414	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BYF1
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This ACE2 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-ACE2 antibody. Overlay histogram showing HepG2 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ACE2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of ACE2 using anti-ACE2 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human CCRF-CEM whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ACE2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of ACE2 is 90-100 kDa.

Description

The ACE2 antibody targets Angiotensin-converting enzyme 2, a type I membrane glycoprotein encoded by the ACE2 gene. Angiotensin-converting enzyme 2 functions as a carboxypeptidase that cleaves angiotensin II to angiotensin (1-7), a peptide with vasodilatory and anti-inflammatory effects. By opposing the classical renin-angiotensin system, Angiotensin-converting enzyme 2 maintains cardiovascular, renal, and pulmonary homeostasis. The ACE2 antibody provides a critical reagent for studying blood-pressure regulation, viral entry mechanisms, and tissue-specific expression of this pivotal enzyme.

Angiotensin-converting enzyme 2 is expressed in the vascular endothelium, lungs, heart, kidneys, and intestinal epithelium. Its catalytic domain hydrolyzes angiotensin II to produce angiotensin (1-7), which signals through the Mas receptor to counteract vasoconstriction and fibrosis. The ACE2 antibody enables precise detection of this enzyme in tissues, helping define its role in vascular tone and inflammatory control. Loss or downregulation of ACE2 disrupts this protective axis, predisposing tissues to hypertension, oxidative stress, and organ injury.

In addition to its enzymatic role, Angiotensin-converting enzyme 2 serves as a functional receptor for several coronaviruses, including SARS-CoV and SARS-CoV-2. Viral spike proteins bind to the extracellular domain of ACE2 to mediate cell entry. The ACE2 antibody supports virology and pathogenesis studies by enabling analysis of receptor abundance and distribution across tissues. Mapping ACE2 expression helps clarify host susceptibility and disease severity patterns in respiratory and cardiovascular systems.

Beyond infection biology, ACE2 participates in glucose metabolism, heart remodeling, and kidney filtration. Experimental models show that enhancing ACE2 activity mitigates cardiac hypertrophy and diabetic nephropathy. The ACE2 antibody supports quantification of these protective effects and is frequently used to monitor therapeutic modulation of the renin-angiotensin system. Dysregulated ACE2 expression has also been linked to inflammatory lung injury and endothelial dysfunction.

The ACE2 antibody is validated for western blotting, immunohistochemistry, and immunofluorescence, producing clear membrane and cytoplasmic staining consistent with its localization. NSJ Bioreagents provides this antibody with verified specificity and reproducibility for cardiovascular, infectious-disease, and molecular-biology research. By enabling accurate detection of Angiotensin-converting enzyme 2, the ACE2 antibody supports exploration of vascular signaling, viral pathogenesis, and therapeutic strategies aimed at restoring physiological balance.

Application Notes

Optimal dilution of the ACE2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ACE2 recombinant protein (Position: Q18-F805) was used as the immunogen for the ACE2 antibody.

Storage

After reconstitution, the ACE2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.