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ACE2 (E1E1I) Mouse Monoclonal Antibody (Alexa Fluor® 488 Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-L	H M	Endogenous	Mouse IgG2b kappa	#Q9BYF1	59272

Product Usage Information

Application

Flow Cytometry (Live)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide, and 2 mg/mL BSA. Store at 4°C. *Do not aliquot the antibody. Protect from light. Do not freeze.*

Specificity/Sensitivity

ACE2 (E1E1I) Mouse Monoclonal Antibody (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total ACE2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human ACE2 protein.

Description

This Cell Signaling Technology® antibody is conjugated to Alexa Fluor® 488 fluorescent dye under optimal conditions and tested in-house for direct flow cytometric analysis in human cells. This antibody conjugate is expected to exhibit the same species cross-reactivity as the unconjugated ACE2 (E1E1I) Mouse mAb #46247.

Background

ACE2 is a carboxypeptidase that catalyses the conversion of angiotensin I to angiotensin 1-9, or of angiotensin II to the vasodilator angiotensin 1-7 (1). ACE2 is a critical component in the renin-angiotensin system (RAS). ACE2 is predominantly expressed in vascular endothelial cells of the heart and kidney and Leydig and Sertoli cells of the testis (2,3). The unique expression pattern of ACE2 determines its essential role in the regulation of cardiovascular and kidney functions, as well as fertility. ACE2 protein is localized mainly in the extracellular space with its carboxy-terminal end attached to the membrane via its transmembrane domain. Active ACE2 enzyme is secreted by cleavage at the amino terminus. Research studies have shown that ACE2 expression is elevated in human failing heart (4). ACE2 has also been identified as the receptor for SARS and SARS-CoV-2 coronaviruses (5-7).

Background References

- Schmidt, B.L. et al. (2000) *J Clin Microbiol* 38, 1279-82.
- Boehm, M. and Nabel, E.G. (2002) *N Engl J Med* 347, 1795-7.
- Douglas, G.C. et al. (2004) *Endocrinology* 145, 4703-11.
- Goulter, A.B. et al. (2004) *BMC Med* 2, 19.
- Li, W. et al. (2005) *EMBO J* 24, 1634-43.
- Hoffmann, M. et al. (2020) *Cell* 181, 271-280.e8.
- Lan, J. et al. (2020) *Nature* 581, 215-20.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-L: Flow Cytometry (Live)

Cross-Reactivity Key

H: Human **M:** Mouse

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