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#36948**ACE2 (E1E1I) Mouse Monoclonal Antibody
(BSA and Azide Free)**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, FC-FP, FC-L, ELISA+	H M	Endogenous	120-135	Mouse IgG2b kappa	#Q9BYF1	59272

Product Usage Information

This product is the carrier free version of product #46247. All data were generated using the same antibody clone in the standard formulation which contains BSA and glycerol.

This formulation is ideal for use with technologies requiring specialized or custom antibody labeling, including fluorophores, metals, lanthanides, and oligonucleotides. It is not recommended for ChIP, ChIP-seq, CUT&RUN or CUT&Tag assays. If you require a carrier free formulation for chromatin profiling, please contact us. Optimal dilutions/concentrations should be determined by the end user.

BSA and Azide Free antibodies are quality control tested by size exclusion chromatography (SEC) to determine antibody integrity.

Formulation

Supplied in 1X PBS (10 mM Na₂HPO₄, 3 mM KCl, 2 mM KH₂PO₄, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

For standard formulation of this product see product #46247

Storage

Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles.* A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Specificity/Sensitivity

ACE2 (E1E1I) Mouse Monoclonal Antibody (BSA and Azide Free) 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.

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

W: Western Blotting **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live) **ELISA+:** ELISA and/or ELISA-like Assays

Cross-Reactivity Key

H: Human **M:** Mouse

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