Mouse ACE-2 Antibody

Monoclonal Rat IgG_{2A} Clone # 460505

Catalog Number: MAB34371

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse ACE-2 in direct ELISAs.
Source	Monoclonal Rat IgG_{2A} Clone # 460505
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse ACE-2 Gln18-Thr740 Accession # Q8R0I0
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

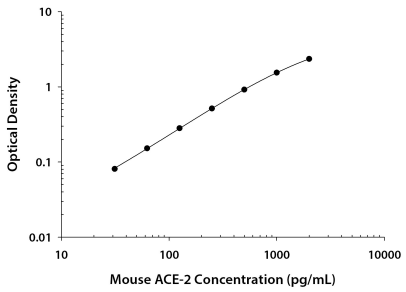
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

ELISA	This antibody functions as an ELISA capture antibody when paired with Goat Anti-Mouse ACE-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3437). *This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Mouse ACE-2 DuoSet ELISA Kit (Catalog # DY3437-05) for convenient development of a sandwich ELISA.*

DATA

ELISA



Mouse ACE-2 ELISA Standard Curve. Recombinant Mouse ACE-2 protein was serially diluted 2-fold and captured by Rat Anti-Mouse ACE-2 Monoclonal Antibody (Catalog # MAB34371) coated on a Clear Polystyrene Microplate (Catalog # DY990). Goat Anti-Mouse ACE-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3437) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

ACE-2, also called ACEH (ACE homologue), is an integral membrane protein and a zinc metalloprotease of the ACE family that also includes somatic and germinal ACE (1). Mouse ACE-2 has about 40% amino acid identity to the N- and C-terminal domains of mouse somatic ACE. The predicted mouse ACE-2 protein sequence consists of 798 amino acids, including a N-terminal signal peptide, a single catalytic domain, a C-terminal membrane anchor, and a short cytoplasmic tail. ACE-2 cleaves angiotensins I and II as a carboxypeptidase. ACE-2 mRNA is found at high levels in testis, kidney and heart and at moderate levels in colon, small intestine and ovary. Classical ACE inhibitors such as captopril and lisinopril do not inhibit ACE-2 activity. Novel peptide inhibitors of ACE-2 do not inhibit ACE activity (2). Genetic data from *Drosophila*, mice and rats show that ACE-2 is an essential regulator of heart function *in vivo* (3). In addition, ACE-2 is a key SARS-CoV Spike protein receptor *in vivo* and has a critical function in acute lung injury (4, 5).

References:

1. Tipnis, S.R. *et al.* (2000) J. Biol. Chem. **275**:33238.
2. Crackower, M.A. *et al.* (2002) Nature **417**:822.
3. Huang, L. *et al.* (2003) J. Biol. Chem. **278**:15532.
4. Kuba, K. *et al.* (2005) Nature Med. **11**:875.
5. Ima, Y. *et al.* (2005) Nature **436**:112.

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