

DESCRIPTION

Species Reactivity	Human/Mouse/Rat/Hamster
Specificity	Detects mouse ACE-2 in direct ELISAs and human, mouse, rat and hamster ACE-2 in Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse ACE-1 is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 460502
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse ACE-2 Gln18-Thr740 (predicted) Accession # Q8R0I0
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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).

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