Mouse ACE-2 Alexa Fluor® 700-conjugated Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2818I
Catalog Number: FAB34372N
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse ACE-2 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2818I
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived mouse ACE-2 Gln18-Thr740 Accession # NP_081562
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was HEK293 Human Cell Line Transfected with Mouse ACE-2 and eGFP

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).

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.

PRODUCT SPECIFIC NOTICES

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