Human ACE/CD143 Antibody

Monoclonal Mouse IgG_1 Clone # 171417

Catalog Number: MAB929

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ACE/CD143 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human ACE-2 is observed. Detects the surface expression of human ACE on full length ACE transfectants, but not on control transfectants by flow cytometry.
Source	Monoclonal Mouse IgG_1 Clone # 171417
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ACE/CD143 aa 30-1261
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 as a 0.2 μm filtered solution in PBS.

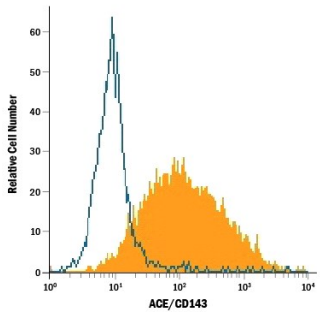
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human ACE/CD143 Somatic Form (Catalog # 929-ZN), see our available Western blot detection antibodies
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of ACE/CD143 in Human Mature Dendritic Cells by Flow Cytometry. Human mature dendritic cells were stained with Mouse Anti-Human ACE/CD143 Monoclonal Antibody (Catalog # MAB929, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human ACE/CD143 Antibody

Monoclonal Mouse IgG_1 Clone # 171417

Catalog Number: MAB929

BACKGROUND

ACE (also known as peptidyl-dipetidase A) is a zinc metallopeptidase important for blood pressure control and water and salt metabolism (2). It cleaves the C-terminal dipeptide from angiotensin I to produce the potent vasopressor octapeptide angiotensin II and inactivates bradykinin by the sequential removal of two C-terminal dipeptides. In addition to the two physiological substrates, ACE cleaves C-terminal dipeptides from various oligopeptides with a free C-terminus. Because of its location and specificity, ACE plays additional roles in immunity, reproduction and neuropeptide regulation. For example, ACE degrades Alzheimer amyloid β-peptide (Aβ), retards Aβ aggregation, deposition, fibril formation, and inhibits cytotoxicity (3).

ACE is a type I membrane protein and exists in two isoforms (2). Somatic ACE, found in endothelial, epithelial and neuronal cells, comprises two highly similar domains called N- and C-domains, each of which contains the HExxH consensus sequence for zinc binding. Germinal ACE, found exclusively in the testes, comprises a single catalytically active domain identical to the C-domain of somatic ACE except for an N-terminal 67 residue germinal ACE-specific sequence. Physiological functions of the two tissue-specific isozymes are not interchangeable (4). For example, sperm-specific expression of the germinal ACE, not the somatic ACE, in ACE knockout male mice restored fertility.

Soluble ACE is present in many biological fluids, such as serum, seminal fluid, amniotic fluid and cerebrospinal fluid (2). The soluble ACE is derived from the membrane forms by actions of secretases or sheddases. The identities of the secretases have not been revealed, although they belong to the family of zinc metallopeptidases (5, 6).

References:

1. Soubrier, *et al.* (1988) Proc. Natl. Acad. Sci. USA **85**:9386.
2. Corvol, P. and T.A. Williams (1998) in *Handbook of Proteolytic Enzymes.* Barrett, A.J. *et al.* (eds): San Diego, Academic Press, p. 1066.
3. Hu, *et al.* (2001) J. Biol. Chem. **276**:47863.
4. Kessler, *et al.* (2000) J. Biol. Chem. **275**:26259.
5. Eyries, *et al.* (2001) J. Biol. Chem. **276**:5525.
6. Alfalah, *et al.* (2001) J. Biol. Chem. **276**:21105.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956