Anti-CAPZA1 Antibody [A2E7]

EM1901-82

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 33 kDa
Clone number:	A2E7

Description: CAPZA1 is a member of the F-actin capping protein alpha subunit family. This gene encodes the alpha subunit of the barbed-end actin binding protein. The protein regulates growth of the actin filament by capping the barbed end of growing actin filaments. F-actin-capping proteins bind in a Ca(2+)-independent manner to the fast growing ends of actin filaments (barbed end) thereby blocking the exchange of subunits at these ends. Unlike other capping proteins (such as gelsolin and severin), these proteins do not sever actin filaments. May play a role in the formation of epithelial cell junctions.

Immunogen: Recombinant protein within Human CAPZA1 aa 60-248 / 286.

Positive control: K-562 cell lysate, 293T cell lysate, Jurkat cell lysate, HeLa cell lysate, HepG2 cell lysate, A549 cell lysate, NIH/3T3 cell lysate, RAW264.7 cell lysate, C2C12 cell lysate, PC-12 cell lysate, HeLa, human colon cancer tissue.

Subcellular location: Cytoskeleton.

Database links: SwissProt: P52907 Human | P47753 Mouse | B2GUZ5 Rat

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:100
IHC-P	1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein G affinity purified.

Images

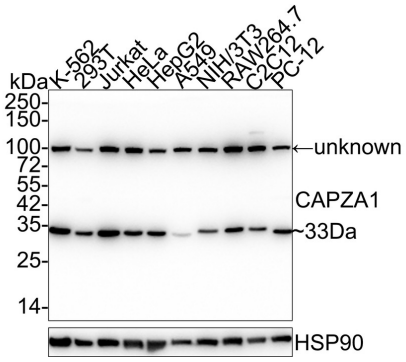

Fig1: Western blot analysis of CAPZA1 on different lysates with Mouse anti-CAPZA1 antibody (EM1901-82) at 1/5,000 dilution.

Lane 1: K-562 cell lysate
Lane 2: 293T cell lysate
Lane 3: Jurkat cell lysate
Lane 4: HeLa cell lysate
Lane 5: HepG2 cell lysate
Lane 6: A549 cell lysate
Lane 7: NIH/3T3 cell lysate
Lane 8: RAW264.7 cell lysate
Lane 9: C2C12 cell lysate
Lane 10: PC-12 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 33 kDa
Observed band size: 33 kDa

Exposure time: 46 seconds;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM1901-82) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

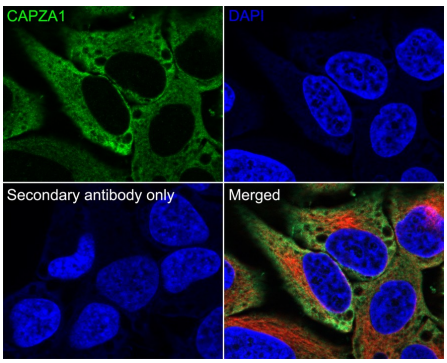

Fig2: Immunocytochemistry analysis of HeLa cells labeling CAPZA1 with Mouse anti-CAPZA1 antibody (EM1901-82) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-CAPZA1 antibody (EM1901-82) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

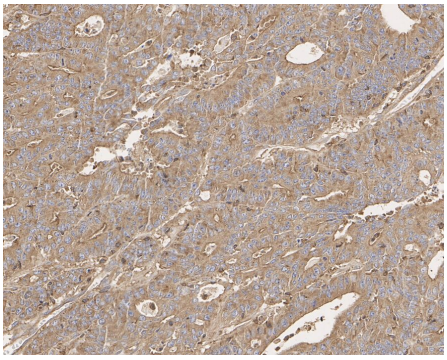

Fig3: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Mouse anti-CAPZA1 antibody (EM1901-82) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-82) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Huang D. et. al. Hypoxia induces actin cytoskeleton remodeling by regulating the binding of CAPZA1 to F-actin via PIP2 to drive EMT in hepatocellular carcinoma. Cancer Lett. 2019 Apr 28;448:117-127.
2. Tsugawa H. et. al. Cancer Stem-Cell Marker CD44v9-Positive Cells Arise From Helicobacter pylori-Infected CAPZA1-Overexpressing Cells. Cell Mol Gastroenterol Hepatol. 2019;8(3):319-334.