Anti-ZAC Antibody

ER1901-48

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 46 kDa

Description: Zinc-activated ion channel (ZAC), is a human protein encoded by the ZACN gene. ZAC forms a cation-permeable ligand-gated ion channel of the "Cys-loop" superfamily. The ZAC gene is present in humans and dogs, but no ortholog is thought to exist in the rat or mouse genomes. ZAC mRNA is expressed in prostate, thyroid, trachea, lung, brain (adult and fetal), spinal cord, skeletal muscle, heart, placenta, pancreas, liver, kidney and stomach. The endogenous ligand for ZAC is thought to be Zn2+, although ZAC has also been found to activate spontaneously. The function of spontaneous ZAC activation is unknown.

Immunogen: Synthetic peptide within Human ZAC aa 139-188 / 412.

Positive control: Human kidney tissue lysate, HepG2 cell lysate, N2A, SiHa, rat brain tissue, human liver tissue, human kidney tissue.

Subcellular location: Cell membrane.

Database links: SwissProt: Q401N2 Human

Recommended Dilutions:

WB	1:500-1:2,000
IF-Cell	1:50-1:100
IHC-P	1:50-1:200

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: Immunogen affinity purified.

Images

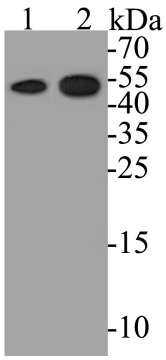

Fig1: Western blot analysis of ZAC on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ER1901-48, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: human kidney tissue lysate
Lane 2: HepG2 cell lysate

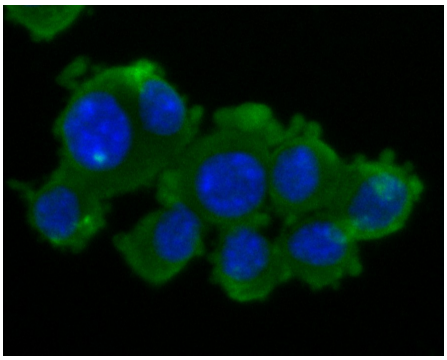

Fig2: ICC staining of ZAC in N2A cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1901-48, 1/200) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

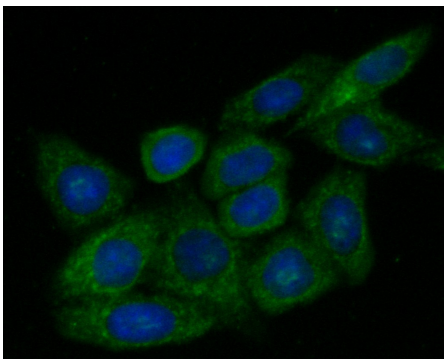

Fig3: ICC staining of ZAC in SiHa cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1901-48, 1/200) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

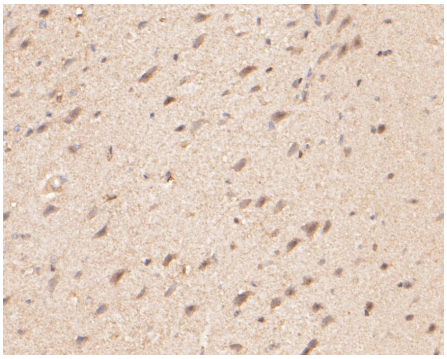

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-ZAC antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1901-48, 1/200) for 30 minutes 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.

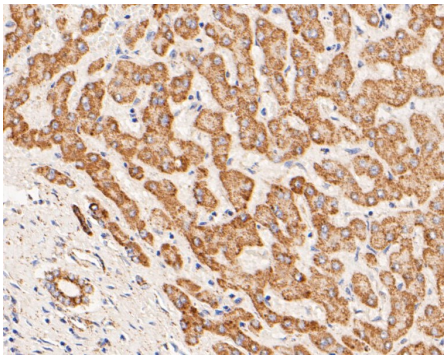

Fig5: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-ZAC antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1901-48, 1/200) for 30 minutes 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.

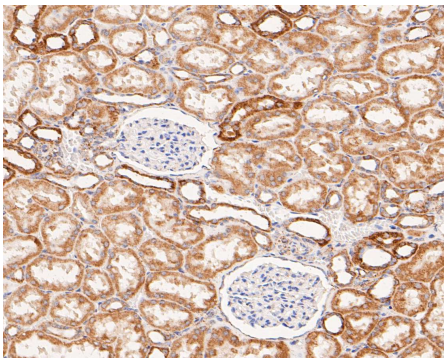

Fig6: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-ZAC antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ER1901-48, 1/200) for 30 minutes 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.

Background References

1. Trattnig SM. et. al. Copper and protons directly activate the zinc-activated channel. Biochem Pharmacol. 2016 Mar 1;103:109-17.
2. Tian Y. et. al. A biomimetic zinc activated ion channel. Chem Commun (Camb). 2010 Mar 14;46(10):1682-4.