

Anti-WNK1 Antibody [PSH20-74] - BSA and Azide free

HA751769



Product Type: Recombinant Rabbit monoclonal IgG, primary antibodies

Species reactivity: Human, Mouse, Rat

Applications: WB, IF-Cell, IHC-P, FC

Molecular Wt: Predicted band size: 251 kDa

Clone number: PSH20-74

Description: WNK (lysine deficient protein kinase 1), also known as WNK1, is an enzyme that is encoded by the WNK1 gene. WNK1 is serine-threonine protein kinase and part of the "with no lysine/K" kinase WNK family. The predominant role of WNK1 is the regulation of cation-Cl⁻ cotransporters (CCCs) such as the sodium chloride cotransporter (NCC), basolateral Na-K-Cl symporter (NKCC1), and potassium chloride cotransporter (KCC1) located within the kidney. CCCs mediate ion homeostasis and modulate blood pressure by transporting ions in and out of the cell. WNK1 mutations as a result have been implicated in blood pressure disorders/diseases; a prime example being familial hyperkalemic hypertension (FHHt).

Immunogen: Recombinant protein within human WNK1 aa 2,000-2,382.

Positive control: HeLa cell lysate, 293T cell lysate, Jurkat cell lysate, NIH/3T3 cell lysate, Mouse testis tissue lysate, Rat testis tissue lysate, HeLa, mouse testis tissue, rat testis tissue, NIH/3T3.

Subcellular location: Cytoplasm, Nucleus, cytoskeleton, spindle.

Database links: SwissProt: Q9H4A3 Human | P83741 Mouse | Q9JIH7 Rat

Recommended Dilutions:

WB 1:20,000

IF-Cell 1:100

IHC-P 1:1,000

FC 1:1,000

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

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Images

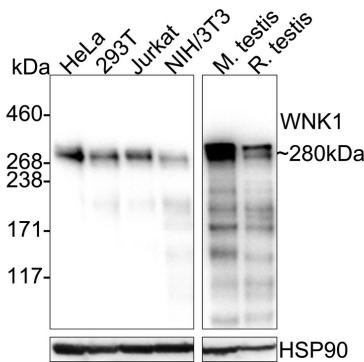


Fig1: Western blot analysis of WNK1 on different lysates with Rabbit anti-WNK1 antibody (HA751769) at 1/20,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
 Lane 2: 293T cell lysate (20 µg/Lane)
 Lane 3: Jurkat cell lysate (20 µg/Lane)
 Lane 4: NIH/3T3 cell lysate (20 µg/Lane)
 Lane 5: Mouse testis tissue lysate (40 µg/Lane)
 Lane 6: Rat testis tissue lysate (40 µg/Lane)

Predicted band size: 251 kDa

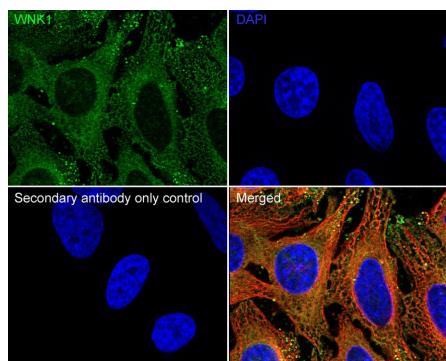
Observed band size: 280 kDa

Exposure time: 20 seconds; ECL: K1801;

3-8% 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 (HA751769) at 1/20,000 dilution was used in primary antibody dilution (K1803) at 4 °C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Fig2: Immunocytochemistry analysis of HeLa cells labeling WNK1 with Rabbit anti-WNK1 antibody (HA751769) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 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 Rabbit anti-WNK1 antibody (HA751769) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) 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 (HA601187, red) was stained at 1/100 dilution overnight at +4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

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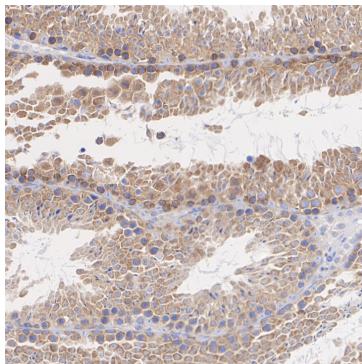


Fig3: Immunohistochemical analysis of paraffin-embedded mouse testis tissue with Rabbit anti-WNK1 antibody (HA751769) at 1/1,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751769) 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.

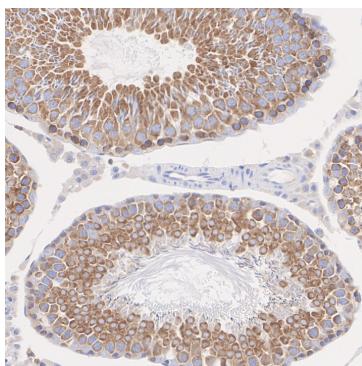


Fig4: Immunohistochemical analysis of paraffin-embedded rat testis tissue with Rabbit anti-WNK1 antibody (HA751769) at 1/1,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA751769) 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.

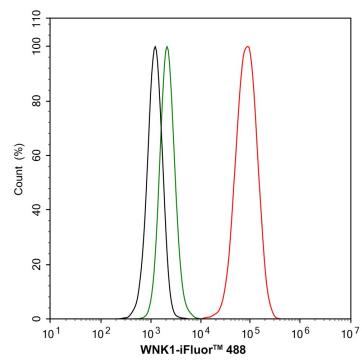


Fig5: Flow cytometric analysis of HeLa cells labeling WNK1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA751769, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

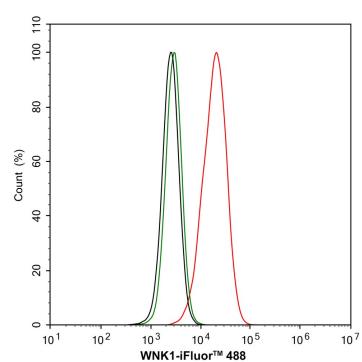


Fig6: Flow cytometric analysis of NIH/3T3 cells labeling WNK1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA751769, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

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

Background References

1. Hou CY et al. WNK1 kinase signaling in metastasis and angiogenesis. *Cell Signal*. 2022 Aug
2. Jung JU et al. WNK1 in Malignant Behaviors: A Potential Target for Cancer? *Front Cell Dev Biol*. 2022 Jun

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