Anti-Phospho-AKT2 (S474) Antibody [PSH09-46] HA723108

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, FC
Molecular Wt:	Predicted band size: 56 kDa
Clone number:	PSH09-46

Description: AKT2, also known as RAC-beta serine/threonine-protein kinase, is an enzyme that in humans is encoded by the AKT2 gene. It influences metabolite storage as part of the insulin signal transduction pathway. This gene is a putative oncogene encoding a protein belonging to the AKT subfamily of serine/threonine kinases that contain SH2-like (Src homology 2-like) domains. The encoded protein is a general protein kinase capable of phosphorylating several known proteins. AKT2 has important roles in controlling glycogenesis, gluconeogenesis, and glucose transport as part of the insulin signal transduction pathway.

Immunogen: Synthetic phospho-peptide corresponding to residues surrounding Ser474 of human AKT2.

Positive control: MCF7 cell lysate, MCF7 treated with 50ng/mL Calyculin A for 45 minutes cell lysate, HEK-293 cell lysate, HEK-293 treated with 50μM LY294002 for 6 hours cell lysate, NIH/3T3 treated with 100ng/mL PDGF for 1 hour cell lysate, C6 cell lysate, C6 treated with 100ng/mL Calyculin A for 1 hour cell lysate, MCF7 cells treated with 50ng/mL Calyculin A for 45 minutes, C6 cells treated with 100ng/mL Calyculin A for 1 hours.

Subcellular location: Cytoplasm, Nucleus, Cell membrane, Early endosome.

Database links: SwissProt: P31751 Human | Q60823 Mouse | P47197 Rat

Recommended Dilutions:

WB	1:2,000
FC	1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

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

Purity: Protein A affinity purified.

Images

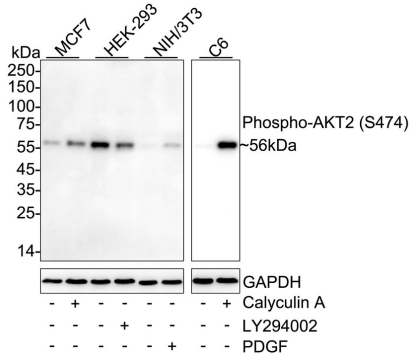

Fig1: Western blot analysis of Phospho-AKT2 (S474) on different lysates with Rabbit anti-Phospho-AKT2 (S474) antibody (HA723108) at 1/2,000 dilution.

Lane 1: MCF7 cell lysate
Lane 2: MCF7 treated with 50ng/mL Calyculin A for 45 minutes cell lysate
Lane 3: HEK-293 cell lysate
Lane 4: HEK-293 treated with 50μM LY294002 for 6 hours cell lysate
Lane 5: NIH/3T3 cell lysate
Lane 6: NIH/3T3 treated with 100ng/mL PDGF for 1 hour cell lysate
Lane 7: C6 cell lysate
Lane 8: C6 treated with 100ng/mL Calyculin A for 1 hour cell lysate

Lysates/proteins at 30 μg/Lane.

Predicted band size: 56 kDa
Observed band size: 56 kDa

Exposure time: Lane 1-6: 3 minutes; Lane 7-8: 12 seconds; ECL: K1802;

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 (HA723108) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

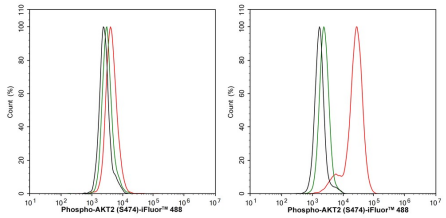

Fig2: Flow cytometric analysis of MCF7 cells (left) / MCF7 cells treated with 50ng/mL Calyculin A for 45 minutes (right) labeling Phospho-AKT2 (S474).

Cells were fixed and permeabilized. Then stained with the primary antibody (HA723108, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ 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℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

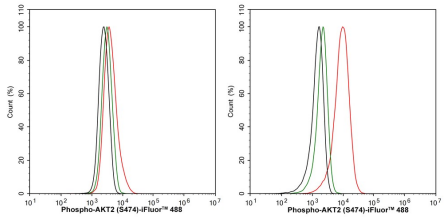

Fig3: Flow cytometric analysis of C6 cells (left) / C6 cells treated with 100ng/mL Calyculin A for 1 hours (right) labeling Phospho-AKT2 (S474).

Cells were fixed and permeabilized. Then stained with the primary antibody (HA723108, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ 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℃. 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. Feng SY et al. Increased joint loading induces subchondral bone loss of the temporomandibular joint via the RANTES-CCRs-Akt2 axis. JCI Insight. 2022 Nov
2. Ghosh S et al. The AKT2/SIRT5/TFEB pathway as a potential therapeutic target in atrophic AMD. bioRxiv [Preprint]. 2023 Aug