Anti-Phospho-MYPT1 (T853) Antibody [PSH08-71] - BSA and Azide free

HA751236

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 115 kDa
Clone number:	PSH08-71

Description: Protein phosphatase 1 regulatory subunit 12A is an enzyme that in humans is encoded by the PPP1R12A gene. Myosin phosphatase target subunit 1, which is also called the myosin-binding subunit of myosin phosphatase, is one of the subunits of myosin phosphatase. Myosin phosphatase regulates the interaction of actin and myosin downstream of the guanosine triphosphatase Rho. The small guanosine triphosphatase Rho is implicated in myosin light chain (MLC) phosphorylation, which results in contraction of smooth muscle and interaction of actin and myosin in nonmuscle cells. The guanosine triphosphate (GTP)-bound, active form of RhoA (GTP.RhoA) specifically interacted with the myosin-binding subunit (MBS) of myosin phosphatase, which regulates the extent of phosphorylation of MLC. Rho-associated kinase (Rho-kinase), which is activated by GTP. RhoA, phosphorylated MBS and consequently inactivated myosin phosphatase. Overexpression of RhoA or activated RhoA in NIH 3T3 cells increased phosphorylation of MBS and MLC. Thus, Rho appears to inhibit myosin phosphatase through the action of Rho-kinase.

Immunogen: Synthetic phospho-peptide corresponding to residues surrounding Thr853 of Human MYPT1.

Positive control: 293T cell lysate, HeLa cell lysate, C2C12 cell lysate, RAW264.7 cell lysate, C6 cell lysate.

Subcellular location: Cytoplasm, cytoskeleton, stress fiber.

Database links: SwissProt: O14974 Human | Q9DBR7 Mouse | Q10728 Rat

Recommended Dilutions:

WB	1:2,000

Storage Buffer: PBS (pH7.4).

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

Purity: Protein A affinity purified.

Images

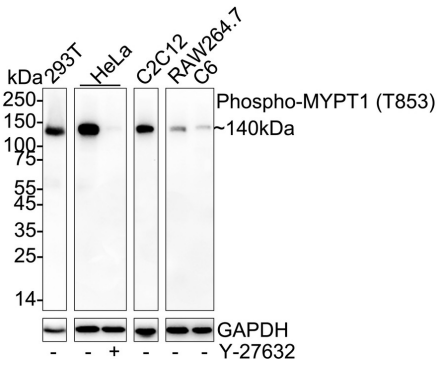

Fig1: Western blot analysis of Phospho-MYPT1 (T853) on different lysates with Rabbit anti-Phospho-MYPT1 (T853) antibody (HA751236) at 1/2,000 dilution.

Lane 1: 293T cell lysate
Lane 2: HeLa cell lysate
Lane 3: HeLa treated with 10μM Y-27632 for 1 hour cell lysate
Lane 4: C2C12 cell lysate
Lane 5: RAW264.7 cell lysate
Lane 6: C6 cell lysate

Lysates/proteins at 20 μg/Lane.

Predicted band size: 115 kDa
Observed band size: 140 kDa

Exposure time: 35 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 (HA751236) 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.

Background References

1. Takahashi H et al. MYPT1-PP1beta phosphatase negatively regulates both chromatin landscape and co-activator recruitment for beige adipogenesis. Nat Commun. 2022 Sep
2. Mehta V et al. SPECC1L binds the myosin phosphatase complex MYPT1/PP1beta and can regulate its distribution between microtubules and filamentous actin. J Biol Chem. 2023 Feb