# HRP Conjugated Anti-GAPDH Antibody [SA30-01]

Product Type: Recombinant Rabbit monoclonal IgG, primary antibodies

Species reactivity: Human, Mouse, Rat

Applications: WB

Molecular Wt: Predicted band size: 36 kDa

Clone number: SA30-01

**Description:** Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby

playing a role in glycolysis and nuclear functions, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC. Modulates the organization and assembly of the cytoskeleton. Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules. Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their

translation.

Conjugate: HRP-conjugated

**Immunogen:** Recombinant protein within mouse GAPDH aa 94-333 / 333.

Positive control: HepG2 cell lysates, PC-12 cell lysates, NIH/3T3 cell lysates, THP-1 cell lysate, MCF-7 cell

lysate, RH-35 cell lysate, HepG2 cell lysate, PC-12 cell lysate, L6 cell lysate, RAW264.7 cell

lysate, A549 cell lysate, PMVEC cell lysate, NIH/3T3 cell lysate, B16F1 cell lysate.

Subcellular location: Cytoplasm, Nucleus, Membrane.

Database links: SwissProt: P04406 Human | P16858 Mouse | P04797 Rat

**Recommended Dilutions:** 

**WB** 1:2,500-1:20,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol.

**Storage Instruction:** Store at  $+4^{\circ}$ C after thawing. Aliquot store at  $-20^{\circ}$ C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

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### **Images**

170-130-100-70-55-40-35-25**Fig1:** Western blot analysis of GAPDH on HepG2 cell lysates with Rabbit anti-GAPDH antibody (HA721131) at different dilutions.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 36 kDa Observed band size: 36 kDa

Exposure time: 30 seconds;

10% 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 (HA721131) at different dilutions were used in 5% NFDM/TBST at room temperature for 2 hours.

**Fig2:** Western blot analysis of GAPDH on PC-12 cell lysates with Rabbit anti-GAPDH antibody (HA721131) at different dilutions.

170-130-100-70-55-40-35-

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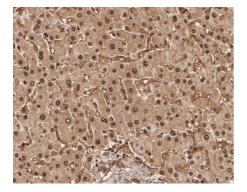
Lysates/proteins at 10 µg/Lane.

Predicted band size: 36 kDa Observed band size: 36 kDa

Exposure time: 30 seconds;

10% 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 (HA721131) at different dilutions were used in 5% NFDM/TBST at room temperature for 2 hours.



**Fig3:** Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-GAPDH antibody (HA721131) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH $_2$ O and PBS, and then probed with the primary antibody (HA721131) at 1/50 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.

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Lysates/proteins at 10 µg/Lane.

Predicted band size: 36 kDa Observed band size: 36 kDa

Exposure time: 30 seconds;

10% 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 (HA721131) at different dilutions were used in 5% NFDM/TBST at room temperature for 2 hours.

**Fig5:** Western blot analysis of GAPDH on different lysates with Rabbit anti-GAPDH antibody (HA721131) at 1/10,000 dilution.

Lane 1: THP-1 cell lysate Lane 2: MCF-7 cell lysate Lane 3: RH-35 cell lysate Lane 4: HepG2 cell lysate Lane 5: PC-12 cell lysate Lane 6: L6 cell lysate

Lane 7: RAW264.7 cell lysate Lane 8: A549 cell lysate Lane 9: PMVEC cell lysate Lane 10: NIH/3T3 cell lysate Lane 11: B16F1 cell lysate

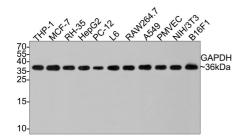
Lysates/proteins at 10 µg/Lane.

Predicted band size: 36 kDa Observed band size: 36 kDa

Exposure time: 30 seconds;

10% 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 (HA721131) at 1/10,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours.



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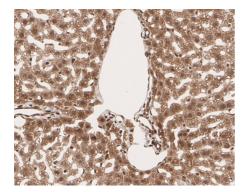
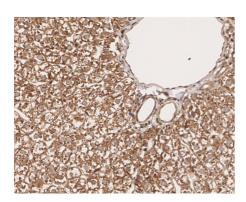


Fig6: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-GAPDH antibody (HA721131) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721131) at 1/200 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.



**Fig7:** Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-GAPDH antibody (HA721131) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721131) at 1/200 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. "High-resolution structure of human D-glyceraldehyde-3-phosphate dehydrogenase." Jenkins J.L., Tanner J.J.Acta Crystallogr. D 62:290-301(2006)
- 2. "Structural analysis of human liver glyceraldehyde-3-phosphate dehydrogenase." Ismail S.A., Park H.W.Acta Crystallogr. D 61:1508-1513(2005)

