ACR001PT

**Monoclonal Antibody to GAPDH (Loading Control) - Purified**

**Alternate names:** CDABP0047, GAPD, Glyceraldehyde-3-Phosphate Dehydrogenase

**Quantity:** 20 µg

**Concentration:** 6.7 mg/ml

**Background:** Glyceraldehyde 3 phosphate dehydrogenase (GAPDH) is well known as one of the key enzymes involved in glycolysis. Besides its functioning as a glycolytic enzyme in cytoplasm, recent evidence suggest that mammalian GAPDH is also involved in a great number of intracellular processes such as membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication, and DNA repair. During the last decade a lot of findings appeared concerning the role of GAPDH in different pathologies including prostate cancer progression, programmed neuronal cell death, age-related neuronal diseases, such as Alzheimer's and Huntington's disease. GAPDH is constitutively expressed in almost all tissues at high levels, therefore becoming the marker of choice when a loading control in Western blotting is required.

**Uniprot ID:** P04406

**NCBI:** NP_002037.2

**GeneID:** 2597

**Host / Isotype:** Mouse / IgG1

**Recommended Isotype Controls:** SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N

**Clone:** 6C5

**Immunogen:** Rabbit GAPDH.

**Remarks:** Hybridoma is derived from hybridization of Sp2/0 myeloma cells with spleen cells of Balb/c mice.

**Format:** Liquid purified IgG fraction

**State:** Liquid purified IgG fraction

**Purification:** Protein A Sepharose Chromatography

**Buffer System:** PBS, pH 7.4

**Preservatives:** 0.09% Sodium Azide

**Applications:** GAPDH Immunoassays.

**Western blot** (e.g. as Loading Control).

**Immunocytochemistry.**

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:** This antibody reacts with GAPDH.

**Species Reactivity:** **Tested:** Human, Porcine, Canine, Rabbit, Cat, Rat, Mouse and Fish. **Does not** react with Bovine and Goat.

For research and in vitro use only. Not for diagnostic or therapeutic work. Material Safety Datasheets are available at www.acris-antibodies.com or on request.
Storage: Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

Product Citations: Purchased from Acris:
9. Maler, MD;Nielsen, PJ;Stichling, N;Cohen, I;Ruzsics, Z;Wood, C;Engelhard, P;Suomalainen, M;Gyory, I;Huber, M;Müller-Quernheim, J;Schamel, WWA;Gordon, S;Jakob, T;Martin, SF;Jahnen-Dechent, W;Greber, UF;Freudenberg, MA;Fejer, G. Key Role of the Scavenger Receptor MARCO in Mediating Adenovirus Infection and Subsequent Innate Responses of Macrophages. MBio 2017. 8, 4. PubMed PMID: 28765216.

General Readings:
Staining of Rh30 rhabdomyosarcoma (upper panels) and SJSA-1 Ewing’s sarcoma cells (lower panels) for GAPDH with ACR001P anti-GAPDH monoclonal antibody (left panels). FITC conjugated secondary antibody. The middle panels show DAPI staining of the cell nuclei. The right panels show merged images.

**Western Blotting** for GAPDH on HUVEC cell lysate using anti-GAPDH monoclonal antibody Cat.-No ACR001P at 2 µg/ml (A and B) and 0.5 µg/ml (C and D).

**Western Blotting** for GAPDH on Rat Brain lysates using anti-GAPDH monoclonal antibody Cat.-No ACR001P at 1 µg/ml (Top) and 0.1 µg/ml (Bottom).
Immunoprecipitation of GAPDH from rat heart extract using anti-GAPDH MAb 6C5: Mixture of protein A-Sepharose with anti-GAPDH MAbs and tissue extract was incubated for 30 min at room temperature and precipitated by centrifugation. Pellet was washed with PBS, suspended in reducing electrophoresis sample buffer and heated for 5 minutes at 100°C. After centrifugation supernatant was loaded on gel and proteins were separated by SDS electrophoresis.

Track 1: Human GAPDH (1 μg).
Track 2: GAPDH immunoprecipitated from rat heart tissue extract.
Track 3: Only MAb 6C5 (A) or 4G5 (B) preincubated with Protein A Sepharose.
Track 4: Only Protein A Sepharose.