

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

<b>Alternate names:</b>	CDABP0047, GAPD, Glyceraldehyde-3-Phosphate Dehydrogenase
<b>Catalog No.:</b>	ACR001P
<b>Quantity:</b>	0.2 mg
<b>Concentration:</b>	5.3 mg/ml
<b>Background:</b>	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 proceses 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.
<b>Uniprot ID:</b>	<a href="#">P04406</a>
<b>NCBI:</b>	<a href="#">NP_002037.2</a>
<b>GeneID:</b>	<a href="#">2597</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Clone:</b>	6C5
<b>Immunogen:</b>	Rabbit GAPDH. <b>Remarks:</b> Hybridoma is derived from hybridization of Sp2/0 myeloma cells with spleen cells of Balb/c mice.
<b>Format:</b>	<b>State:</b> Liquid purified IgG fraction. <b>Purification:</b> Protein A Sepharose Chromatography. <b>Buffer System:</b> PBS, pH 7.4 containing 0.09% Sodium Azide as preservative.
<b>Applications:</b>	ELISA. 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.
<b>Specificity:</b>	This antibody reacts with GAPDH from Fish, Mouse, Rat, Cat, Rabbit, Canine, Pork and Human. No cross-reaction with GAPDH from Yeast.

**For research and in vitro use only. Not for diagnostic or therapeutic work.**  
Material Safety Datasheets are available at [www.acris-antibodies.com](http://www.acris-antibodies.com) or on request.

Antibody Hotline - Technical Questions - Antibody Location Service  
Free Call: 0800-2274746 (Germany only) - [www.acris-antibodies.com](http://www.acris-antibodies.com)

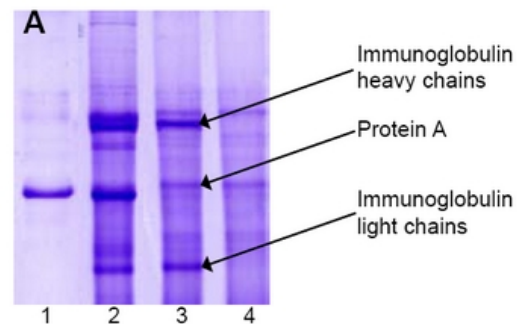
**Storage:** Store the antibody undiluted at 2-8°C.  
Shelf life: one year from despatch.

**Product Citations:** **Purchased from Acris:**

1. Kadow S, Jux B, Zahner SP, Wingerath B, Chmill S, Clausen BE, et al. Aryl hydrocarbon receptor is critical for homeostasis of invariant gammadelta T cells in the murine epidermis. *J Immunol.* 2011 Sep 15;187(6):3104-10. doi: 10.4049/jimmunol.1100912. Epub 2011 Aug 15. PubMed PMID: 21844385.
2. Jux B, Kadow S, Esser C. Langerhans cell maturation and contact hypersensitivity are impaired in aryl hydrocarbon receptor-null mice. *J Immunol.* 2009 Jun 1;182(11):6709-17. doi: 10.4049/jimmunol.0713344. PubMed PMID: 19454665.
3. Salameh A, Krautblatter S, Baessler S, Karl S, Rojas Gomez D, Dhein S, et al. Signal transduction and transcriptional control of cardiac connexin43 up-regulation after alpha 1-adrenoceptor stimulation. *J Pharmacol Exp Ther.* 2008 Jul;326(1):315-22. doi: 10.1124/jpet.108.136663. Epub 2008 Apr 29. PubMed PMID: 18445782.

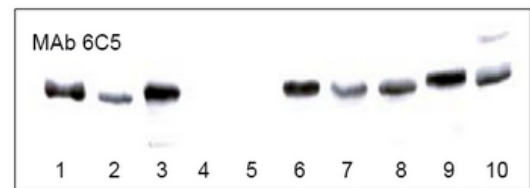
**General Readings:** 1. FEBS Letters, volume 300, number 1, 9-12, 1992

**Pictures:** **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

Immunodetection of GAPDH in tissue extracts using 6C5 monoclonal antibody in Western blotting after SDS-PAGE in reducing conditions: Heart extracts were prepared from different animal species. About 0.5 mg of homogenized wet cardiac tissue per track was loaded. Anti-mouse IgG conjugated with HRP was used for MAb-GAPDH immune complex visualization.



**Immunostaining of GAPDH in A-10 cell line (rat aortic smooth muscle cells):** Cells were fixed by formalin and GAPDH was stained by monoclonal antibody 6C5 (green colour). F-actin microfilaments-binding dye (red). DNA-binding dye (dark blue)

