

Purified anti-GAPDH Antibody

Catalog# / Size	649201 / 25 µg 649202 / 100 µg
Clone	FF26A/F9
Regulatory Status	RUO
Other Names	glyceraldehyde-3-phosphate dehydrogenase
Isotype	Mouse IgG1, κ
Description	This mouse monoclonal GAPDH antibody recognizes human GAPDH, also known as glyceraldehyde-3-phosphate dehydrogenase. GAPDH is well known for its glycolytic function of converting D-glyceraldehyde-3-phosphate to 1,3-bisphosphoglycerate. GAPDH is a ubiquitously expressed and has a molecular mass of 36 kD. Though differentially expressed from tissue to tissue, GAPDH is frequently used as a loading control for assays involving mRNA and protein detection. In more recent studies, GAPDH has been shown to be involved in microtubule bundling, prostate cancer progression, programmed neuronal cell death, DNA replication, and DNA repair. Recent work has elucidated roles for GAPDH in apoptosis, gene expression and nuclear transport. GAPDH may also play a role in neurodegenerative pathologies such as Huntington and Alzheimer's diseases. The FF26A/F9 monoclonal antibody has been shown to be useful for Western blotting.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human CD4 lymphocytes
Formulation	This antibody is provided in phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	Upon receipt, store undiluted between 2°C and 8°C.
Application	WB - Quality tested IHC, IP - Reported by the developer, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . Western blotting, suggested working dilution(s): Use 0.1 - 1.0 µg antibody per 1 ml antibody dilution buffer for each mini-gel. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	The optimal concentration should be determined by titration for each individual assay of interest. Clone FF26A/F9 is only reactive to human GAPDH, and not cross-reactive to mouse or rat GAPDH.
Application References	<ol style="list-style-type: none"> 1. Maestre L, <i>et al.</i> 2009. <i>Haematologica</i>. 94:419. 2. Zou L, <i>et al.</i> 2012. <i>J Biol. Chem.</i> 287:7190. PubMed 3. Chen CY, <i>et al.</i> 2012. <i>PNAS</i>. 110:630 PubMed 4. Trifari S, <i>et al.</i> 2013. <i>PNAS</i>. PubMed 5. Liu CC, <i>et al.</i> 2013. <i>Mol. Cell Biol.</i> 33:4334. PubMed 6. Trifari S, <i>et al.</i> 2013. <i>PNAS</i>. 110:18608. PubMed 7. Butin-Israeli V, <i>et al.</i> 2015. <i>Mol. Cell Biol.</i> 35:884. PubMed
Product Citations	<ol style="list-style-type: none"> 1. Dragoj M, <i>et al.</i> 2017. <i>Invest New Drugs</i>. 10.1007/s10637-017-0494-4. PubMed 2. Ong SM, <i>et al.</i> 2018. <i>Cell Death Dis.</i> 9:266. PubMed 3. Zhao J <i>et al.</i> 2019. <i>Transl Psychiatry</i>. 9(1):247 . PubMed 4. Ruehle S <i>et al.</i> 2017. <i>Journal of neurochemistry</i>. 142(4):521-533 . PubMed 5. Lovatt M, <i>et al.</i> 2018. <i>Antioxidants (Basel)</i>. 0.416666667. PubMed

6. Wahlig S, *et al.* 2020. *Sci Rep.* 1.584027778. [PubMed](#)
7. Zou L, *et al.* 2012. *J Biol Chem.* 287:7190. [PubMed](#)
8. Chen C, *et al.* 2013. *Proc Natl Acad Sci U S A.* 110:630. [PubMed](#)
9. Liu C, *et al.* 2013. *Mol Cell Biol.* 33:4334. [PubMed](#)
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12. Liu R, *et al.* 2021. *Oncol Lett.* 21:06. [PubMed](#)

RRID AB_10613283 (BioLegend Cat. No. 649201)
 AB_10612752 (BioLegend Cat. No. 649202)

Antigen Details

Structure	Belongs to the glyceraldehyde-3-phosphate dehydrogenase family, predicted molecular weight 36 kD. The enzyme exists as a tetramer of identical chains.
Distribution	Ubiquitously expressed, locate in cytoplasm and perinuclear region.
Function	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and and nicotinamide adenine dinucleotide (NAD). Independent of its glycolytic activity it is also involved in membrane trafficking in the early secretion pathway.
Interaction	Interacts with TPPP. Interacts with EIF1ADand WARS. Interacts with SUMO4, GLUT4, nPKC-iota and CAMK2
Biology Area	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation, Signal Transduction
Antigen References	<ol style="list-style-type: none"> 1. Ercolani L, <i>et al.</i> 1988. <i>J. Biol. Chem.</i> 263:15335. 2. Meyer-Siegler K, <i>et al.</i> 1991. <i>P. Natl. Acad. Sci. USA</i> 88:8460. 3. Hara MR and Snyder SH. 2006. <i>Cell Mol. Neurobiol.</i> 26:527. 4. Zheng L, <i>et al.</i> 2003. <i>Cell.</i> 114:255. 5. Wang Q, <i>et al.</i> 2005. <i>FASEB J.</i> 19:869. 6. Bae BI, <i>et al.</i> 2006. <i>P. Natl. Acad. Sci. USA.</i> 103:3405.
Gene ID	5590

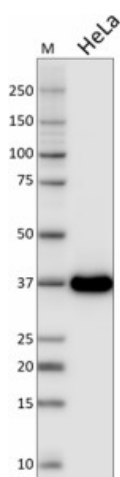
Related Protocols

[Western Blotting Protocol](#)

Other Formats

Purified anti-GAPDH, Direct-Blot™ HRP anti-GAPDH

Product Data



Whole cell extracts (15 µg protein) from HeLa cells were resolved on a 4-12% Bis-Tris gel, transferred to a nitrocellulose membrane and probed with 1.0 µg/mL (1:500 dilution) of Purified anti-GAPDH Antibody, clone FF26A/F9, overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-mouse IgG Antibody (Cat. No. 405306) at a 1:3000 dilution. Lane M: Molecular Weight marker.

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