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Product datasheet for TA336636

GAPDH Mouse Monoclonal Antibody [Clone ID: 2D4A7]

Product data:

Product Type:	Primary Antibodies
Clone Name:	2D4A7
Applications:	IF, WB
Recommended Dilution:	WB: 1:20000, ELISA: 1:100-1:2000, IF: 1:200-1:1000, IHC: 1:1000-1:4000, IHC-P: 1:1000-1:4000
Reactivity:	Human, Mouse, Rat, Porcine, Rabbit
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Ni-NTA purified recombinant human GAPDH expressed in E. Coli strain BL21 (DE3). [UniProt# P04406]
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	38 kDa
Gene Name:	glyceraldehyde-3-phosphate dehydrogenase
Database Link:	NP_002037 Entrez Gene 14433 MouseEntrez Gene 24383 RatEntrez Gene 2597 Human P04406

View online »

Background: GAPDH (glyceraldehyde-3-phosphate dehydrogenase or GAPD) is a key enzyme in glycolytic pathway, wherein it catalyzes the first step by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. It localizes mainly in the cytoplasm from where it translocates to nucleus following S-nitrosylation and interaction with SIAH1. Nuclear GAPDH implicates in transcription, RNA transport, DNA replication and apoptosis, via its nitrosylase activity which mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2, PRKDC etc. GAPDH also regulates the organization/assembly of cytoskeleton and facilitates CHP1-dependent microtubule - membrane associations. It is a component of GAIT (gamma interferon-activated inhibitor of translation) complex which mediates IFN-gamma-induced transcript-selective translation inhibition in inflammation. Because of its expression as housekeeping protein in most cell types, GAPDH is often used as a control molecule in various genes expression studies, however, recent evidence has shown the association of its altered expression with neurodegenerative pathologies such as Huntington disease, Alzheimer's disease etc., and elevated GAPDH mRNA/protein expression levels have been seen in pancreatic, lung and prostate cancers.

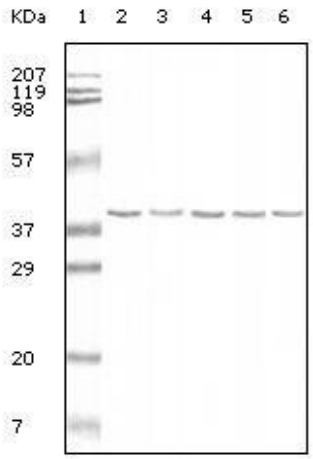
Synonyms: G3PD; GAPD; HEL-S-162eP

Note: This GAPDH antibody is useful for ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry paraffin embedded sections and Western Blot.

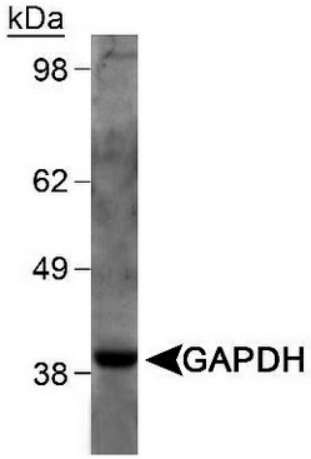
Protein Families: ES Cell Differentiation/IPS

Protein Pathways: Alzheimer's disease, Glycolysis / Gluconeogenesis, Metabolic pathways

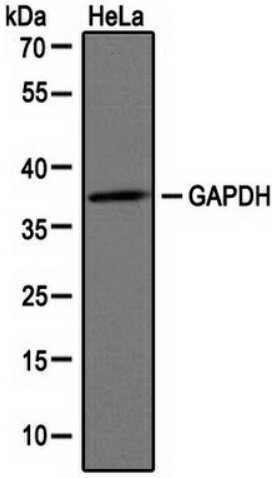
Product images:



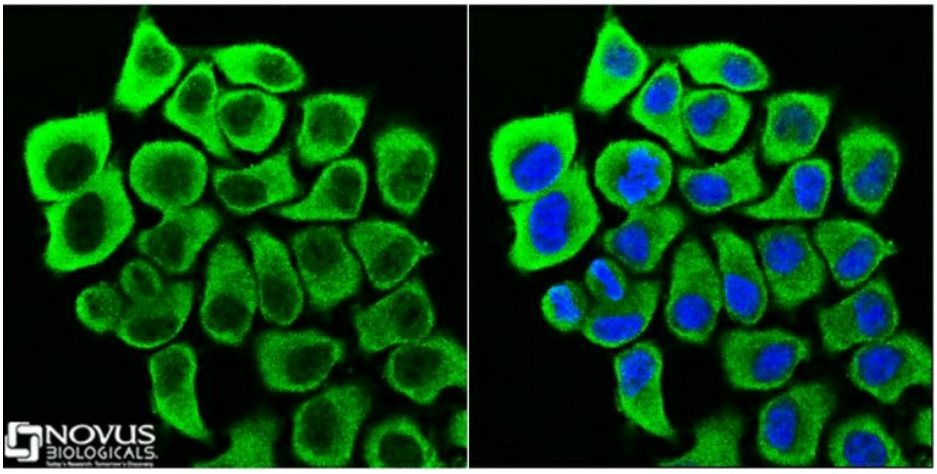
Western Blot: GAPDH Antibody (2D4A7) TA336636 - Analysis using anti-GAPDH monoclonal antibody, against cell lysate (2: Hela, 3: K562, 4: Jurkat, 5: NIH/3T3, 6: HepG-2).



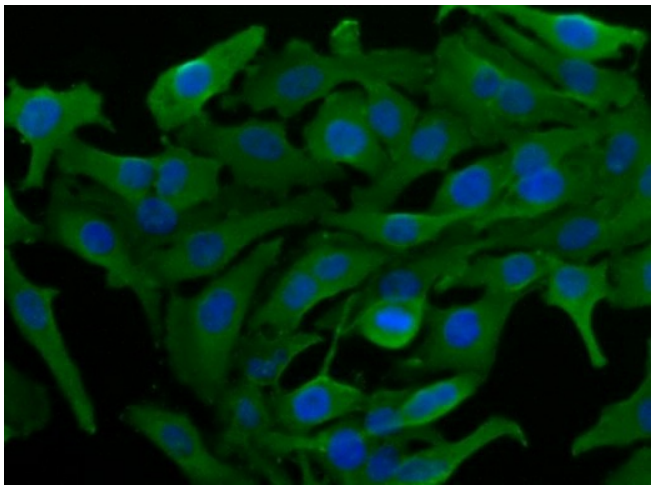
Western Blot: GAPDH Antibody (2D4A7) TA336636 - Detection of GAPDH in mouse liver.



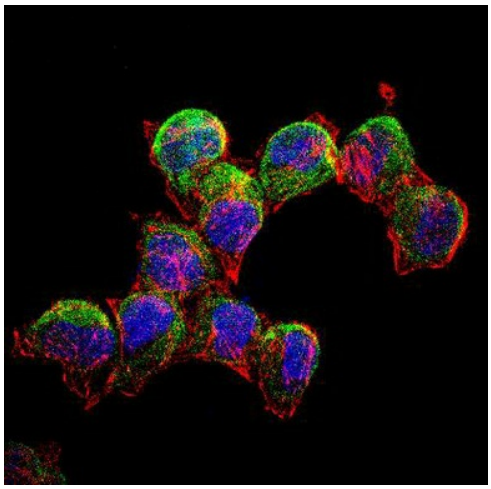
Western Blot: GAPDH Antibody (2D4A7) TA336636 - Western blot analysis of HeLa cell lysate using GAPDH antibody (TA336636) at 1:1000.



Immunocytochemistry/Immunofluorescence: GAPDH Antibody (2D4A7) TA336636 - Confocal immunofluorescence analysis of HeLa cells using GAPDH antibody at 1:50 (green). Nuclei were counterstained using DAPI (blue).



Immunocytochemistry/Immunofluorescence: GAPDH Antibody (2D4A7) TA336636 - Detection of GAPDH (Green) in Hela cells using TA336636 at a 1:200 dilution. Nuclei (Blue) were counterstained using Hoechst 33258.



Immunocytochemistry/Immunofluorescence: GAPDH Antibody (2D4A7) TA336636 - IF Confocal analysis of Hela cells using GAPDH antibody (TA336636, 1:50). An Alexa Fluor 488-conjugated Goat to mouse IgG was used as secondary antibody (green, A). Actin filament