

Datasheet for 600-401-GV0S**GAPDH Antibody****Overview**

Description:	Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - 600-401-GV0S
Item No.:	600-401-GV0S
Size:	25 µL
Applications:	ELISA, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	GAPDH loading control antibody is ideal for Western Blotting, ELISA, IHC and IF Microscopy. GAPDH is constitutively expressed at high levels in almost all tissues and cell lines, making it ideal for use as a loading control antibody in immunoblots. A loading control antibody is critical for the correct interpretation of your western blot. Antibodies to loading controls are used to normalize the levels of protein detected by confirming that protein loading is uniform across the gel. Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) catalyzes the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD), an important energy-yielding step in carbohydrate metabolism. Recent evidence suggests that it also is involved in a number of cellular processes such as membrane fusion, phosphotransferase activity, DNA replication and repair, and nuclear RNA export. GAPDH has also been implicated in playing a role in different pathologies such as cancer progression, apoptosis, and neuronal diseases such as Alzheimer's and Huntington's disease. Anti-GAPDH antibody is ideal for investigators involved in apoptosis, cancer, DNA damage and repair and neuroscience.
Synonyms:	rabbit anti-GAPDH antibody, rabbit anti-Glyceraldehyde-3-phosphate dehydrogenase antibody, GAPDH Loading Control Antibody, Anti-GAPDH, Glyceraldehyde-3-phosphate dehydrogenase, G3PDH, GAPD, Peptidyl-cysteine S-nitrosylase GAPDH
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	GAPDH
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	GAPDH Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the N-terminus of human Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH).
Purity/Specificity:	Anti-GAPDH Antibody is directed against human GAPDH protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest that this antibody would react with GAPDH from a wide range of organisms, including most vertebrates and some yeast. Broad reactivity makes this antibody an excellent loading control.
Relevant Links:	• GenelD - 2597 • NCBI - 7669492 • UniProtKB - P04406

Application Details

Tested Applications:	ELISA, WB
Application Note:	Anti-GAPDH Antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~36 kDa in size corresponding to GAPDH by western blotting in the appropriate cell lysate or extract. GAPDH is constitutively expressed at high levels in almost all tissues and cell lines, making it ideal for use as a loading control marker. This Anti-GAPDH Antibody product is a new product replacing p/n 600-401-A33S.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5.0 µg/ml
WB:	1:1000

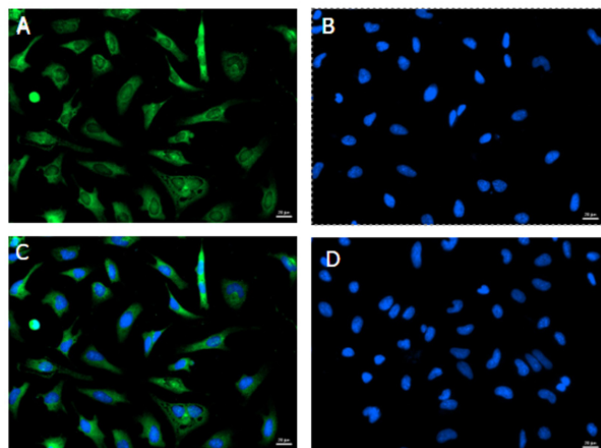
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.17 by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy

Immunofluorescence Microscopy of Rabbit Anti-Glyceraldehyde 3-Phosphate Dehydrogenase Antibody.
Cells: HeLa cells.

Fixation: Ice Cold Methanol.

Permeabilization: Ice Cold Methanol.

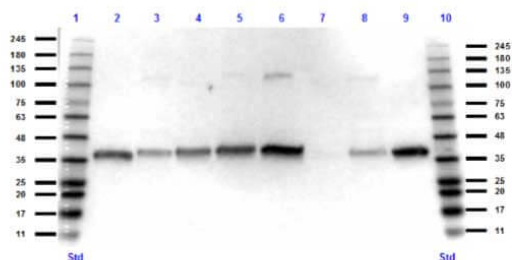
Primary antibody: GAPDH antibody at 1:250 overnight at 4°C.

Secondary antibody: Goat Anti-Rabbit DyLight™488 (p/n 611-141-122) at 1:1,000 for 1hr at RT.

Localization: GAPDH is cytoplasmic.

Staining: (A) Anti-GAPDH (green), (B) Hoechst Nuclear stain (blue), (C) merge, (D) secondary only and Hoechst Nuclear stain.

Magnification Objective: 20x.



Western Blot

Western Blot of Rabbit anti-GAPDH antibody. Lane 1: Opal Pre-stained ladder (p/n MB-210-0500). Lane 2: NIH/3T3 Lysate (p/n W10-000-358). Lane 3: HEK293 lysate (p/n W09-000-365). Lane 4: MOLT-4 Lysate (p/n W09-001-GK2). Lane 5: A549 Lysate (p/n W09-001-372). Lane 6: HeLa Lysate (p/n W09-000-364). Lane 7: NIH 3T3 Nuclear Lysate (W10-001-A74). Lane 8: HeLa Nuclear Lysate (p/n W09-001-367). Lane 9: Jurkat Lysate (p/n W09-001-370). Lane 10: Opal Pre-stained ladder (p/n MB-210-0500). Load: 35 µg per lane. Primary antibody: GAPDH antibody at 1:1,000 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:70,000 for 30 min at RT. Blocking Buffer: MB-070 for 30 min at RT. Predicted/Observed size: 36 kDa for GAPDH.

References

- Quiñones JL. et al. Oxidative DNA-protein crosslinks formed in mammalian cells by abasic site lyases involved in DNA repair. *DNA Repair (Amst)* (2020)
- Matthias Nahrendorf et al. Activatable magnetic resonance imaging agent reports myeloperoxidase activity in healing infarcts and noninvasively detects the antiinflammatory effects of atorvastatin on ischemia-reperfusion injury. *Circulation*. (2008)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.