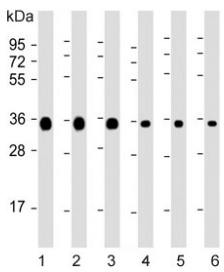
GAPDH Antibody [clone 1653CT401.3.33] (F54491)

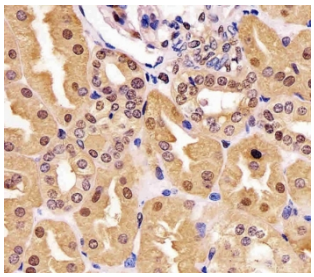
Catalog No.	Formulation	Size
F54491-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54491-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

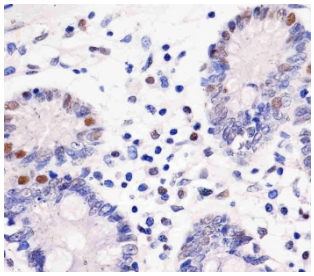
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	IgG1, kappa
Clone Name	1653CT401.3.33
Purity	Protein G affinity
UniProt	P04406
Localization	Cytoplasmic, nuclear
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:25 Immunofluorescence: 1:25
Limitations	This GAPDH antibody is available for research use only.



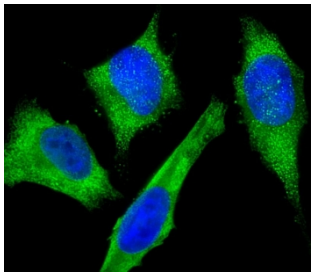
Western blot testing of 1) human HeLa, 2) human Jurkat, 3) human A549, 4) rat C6, 5) mouse NIH 3T3 and 6) mouse brain lysate with GAPDH antibody. Predicted molecular weight ~36 kDa.



IHC testing of FFPE human kidney tissue with GAPDH antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



IHC testing of FFPE human colon tissue with GAPDH antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Immunofluorescent staining of fixed and permeabilized human HeLa cells with GAPDH antibody (green) and DAPI nuclear stain (blue).

Description

GAPDH antibody is an essential tool for comparative biology, molecular evolution, and cross species protein analysis. The encoded protein, glyceraldehyde 3 phosphate dehydrogenase (GAPDH), is one of the most highly conserved enzymes in biology. It catalyzes a key step in glycolysis, converting glyceraldehyde 3 phosphate to 1,3 bisphosphoglycerate while generating NADH. Its evolutionary conservation across bacteria, plants, yeast, and mammals highlights its fundamental role in energy metabolism.

Because of its high conservation, GAPDH antibody can detect the protein across diverse organisms. This makes it useful for cross species experiments, including model organisms such as yeast, zebrafish, mouse, and human. GAPDHÃ¢Â€Â™s universal expression allows it to serve as a reference protein in evolutionary studies and as a housekeeping protein in basic research.

Beyond its metabolic role, GAPDH exhibits non glycolytic functions that are also conserved. These include roles in transcriptional regulation, apoptosis, vesicle transport, and DNA repair. Such multifunctionality demonstrates that GAPDH has adapted diverse cellular roles while maintaining its core enzymatic function throughout evolution.

Structurally, GAPDH is a tetrameric enzyme with conserved catalytic and NAD binding domains. Antibody based detection ensures reliable measurement of GAPDH in comparative systems where genetic homology may vary but protein structure is preserved. This makes GAPDH antibody a versatile reagent for studying protein evolution and conservation.

The GAPDH antibody is commonly used in western blotting, immunohistochemistry, immunofluorescence, and ELISA across different organisms. These applications support research in metabolism, molecular evolution, and comparative biology. For scientists studying conserved metabolic pathways or performing cross species normalization, the GAPDH antibody is a reliable and specific reagent. NSJ Bioreagents offers validated antibodies that ensure reproducibility and accuracy across diverse systems.

Application Notes

The stated application concentrations are suggested starting points. Titration of the GAPDH antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Recombinant human protein was used as the immunogen for the GAPDH antibody.

Storage

Aliquot the GAPDH antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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