

PRODUCT INFORMATION



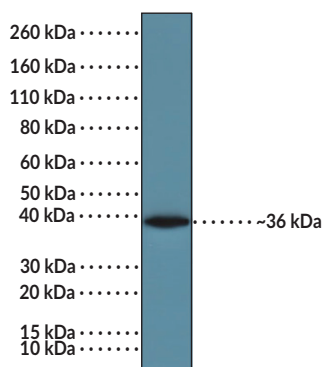
GAPDH (C-Term) Rabbit Monoclonal Antibody (RM114)

Item No. 32128

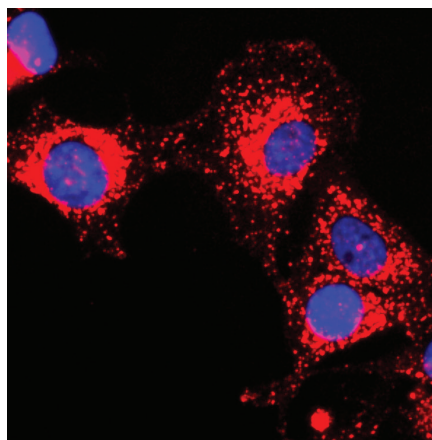
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	G3PD Protein, Human, GAPD Protein, Human, Glyceraldehyde-3-phosphate dehydrogenase, HEL-S-162eP Protein, Peptidyl-cysteine S-nitrosylase
Immunogen:	Peptide from the C-terminal region of GAPDH
Cross Reactivity:	(+) GAPDH
Species Reactivity:	Species Independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM114
Host:	Rabbit
Isotype:	IgG
Applications:	Immunocytochemistry (ICC), immunoprecipitation (IP), chromatin immunoprecipitation (ChIP), and Western blot (WB); the recommended starting dilution for ICC, IP, and ChIP is 1:200 and 1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of A431 cells using GAPDH (C-Term) Rabbit Monoclonal Antibody (RM114) at a 1:1,000 dilution.



Immunofluorescent labeling of HeLa cells using GAPDH (C-Term) Rabbit Monoclonal Antibody (RM114) at a 1:200 dilution (red). Nuclei have been labeled with DAPI (blue).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is an enzyme that catalyzes the conversion of glyceraldehyde-3-phosphate (Item No. 17865) to 1,3-bisphosphoglycerate during glycolysis and is involved in numerous additional cellular processes, including intracellular trafficking, receptor-mediated signaling, apoptosis, DNA repair, and the oxidative stress response.^{1,2} It exists as a tetramer and is composed of an N-terminal domain, which contains binding sites for NAD⁺, phosphatidylserine, RNA, and glutathione, and a C-terminal catalytic domain.³ GAPDH is widely expressed and primarily localizes to the cytosol, where it has roles in glycolysis and intracellular trafficking.^{1,4} It also localizes to the nucleus, mediating DNA integrity, gene transcription, and apoptosis, as well as to cellular membranes, where it has roles in membrane fusion and iron transport.⁴ GAPDH expression is increased by insulin, hypoxia-inducible factor-1 (HIF-1), p53, and nitric oxide (NO) and decreased by acetylated histones.^{1,5} Aberrant mRNA and protein levels of GAPDH have been found in tumor biopsies from patients with a variety of cancers, including lung, renal cell, colorectal, or breast cancer.⁶ Cayman's GAPDH (C-Term) Rabbit Monoclonal Antibody (RM114) can be used for immunocytochemistry (ICC), immunoprecipitation (IP), chromatin immunoprecipitation (ChIP), and Western blot (WB) applications. The antibody recognizes the C-terminal region of GAPDH at approximately 36 kDa.

References

1. Tristan, C., Shahani, N., Sedlak, T.W., *et al.* The diverse functions of GAPDH: Views from different subcellular compartments. *Cell. Signal.* **23(2)**, 317-323 (2011).
2. Sirover, M.A. On the functional diversity of glyceraldehyde-3-phosphate dehydrogenase: Biochemical mechanisms and regulatory control. *Biochim. Biophys. Acta* **1810(8)**, 741-751 (2011).
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