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PHGDH Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2936c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O43175
Other Accession	O08651, Q61753, Q60HD7, NP_006614
Reactivity	Human
Predicted	Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20883
Calculated MW	56651
Antigen Region	249-277

Additional Information

Gene ID	26227
Other Names	D-3-phosphoglycerate dehydrogenase, 3-PGDH, PHGDH, PGDH3
Target/Specificity	This PHGDH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 249-277 amino acids from the Central region of human PHGDH.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PHGDH Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PHGDH
Synonyms	PGDH3

Function

Catalyzes the reversible oxidation of 3-phospho-D-glycerate to 3-phosphonooxypyruvate, the first step of the phosphorylated L- serine biosynthesis pathway. Also catalyzes the reversible oxidation of 2-hydroxyglutarate to 2-oxoglutarate and the reversible oxidation of (S)-malate to oxaloacetate.

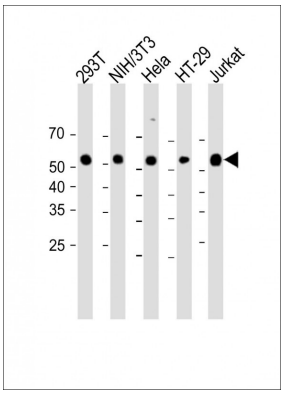
Background

3-Phosphoglycerate dehydrogenase (PHGDH; EC 1.1.1.95) catalyzes the transition of 3-phosphoglycerate into 3-phosphohydroxypyruvate, which is the first and rate-limiting step in the phosphorylated pathway of serine biosynthesis, using NAD+/NADH as a cofactor.

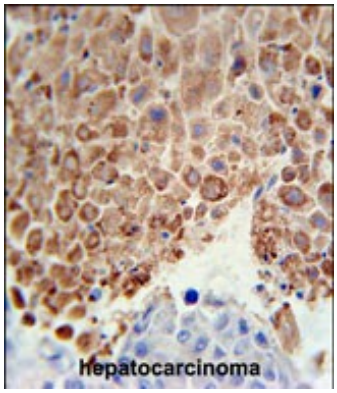
References

Du, H., et al. Reproduction 139(1):237-245(2010)
Burton, R.L., et al. Biochemistry 48(22):4808-4815(2009)
Kim, J.W., et al. Psychiatr. Genet. 19 (3), 161 (2009) :
Tabatabaie, L., et al. Hum. Mutat. 30(5):749-756(2009)

Images

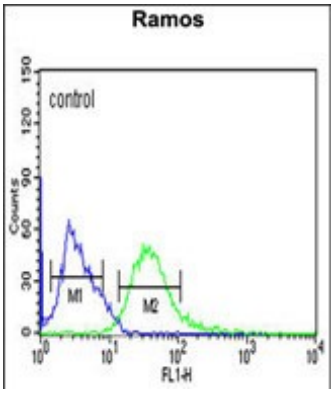


All lanes: Anti-PHGDH Antibody (Center) at 1:2000 dilution Lane 1: 293T whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lane 3: Hela whole cell lysate Lane 4: HT-29 whole cell lysate Lane 5: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 57 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



PHGDH Antibody (Center) (Cat. #AP2936c) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PHGDH Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

PHGDH Antibody (Center) (Cat. #AP2936c) flow cytometric analysis of Ramos cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Citations

- Quantitative proteomic analysis of the miR-148a-associated mechanisms of metastasis in non-small cell lung cancer.
- Systematic analysis of mRNA expression profiles in NSCLC cell lines to screen metastasis-related genes.