Product Name: **KD-Validated PHGDH Mouse Monoclonal Antibody**
Catalog #: **KVAb00427**
For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Mouse
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG2a
Clonality	Mouse mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2,500; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 56.7kDa

Antigen Information

Gene Name	PHGDH
Alternative Names	PHGDH; Phosphoglycerate Dehydrogenase; D-3-Phosphoglycerate Dehydrogenase; SERA; GDH; PDG; 2-Oxoglutarate Reductase; Malate Dehydrogenase; EC 1.1.1.95; 3-PGDH; Epididymis Secretory Protein Li 113; 3-Phosphoglycerate Dehydrogenase; EC 1.1.1.399; EC 1.1.1.37; HEL-S-113; EC 1.1.1; PHGDHD; 3PGDH; PGDH3; NLS1; PGAD; NLS; PGD
Gene ID	26227.0
SwissProt ID	O43175
Immunogen	Recombinant protein of human PHGDH

Background

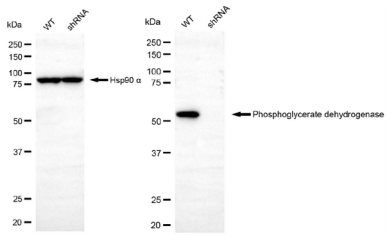
This gene encodes the enzyme which is involved in the early steps of L-serine synthesis in animal cells. L-serine is required for

D-serine and other amino acid synthesis. The enzyme requires NAD/NADH as a cofactor and forms homotetramers for activity. Mutations in this gene have been found in a family with congenital microcephaly, psychomotor retardation and other symptoms. Multiple alternatively spliced transcript variants have been found, however the full-length nature of most are not known. [provided by RefSeq, Aug 2011]

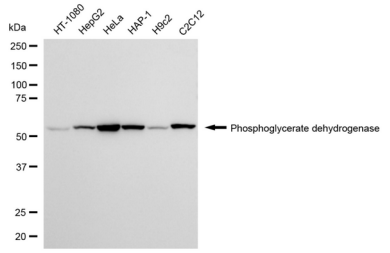
Research Area

Metabolism

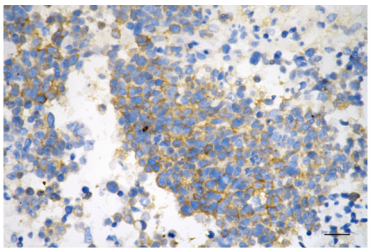
Image Data



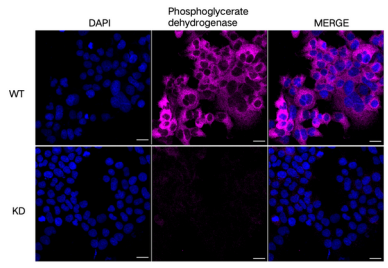
Western blotting analysis using phosphoglycerate dehydrogenase antibody (KVAb00427). Phosphoglycerate dehydrogenase expression in wild-type (WT) and phosphoglycerate dehydrogenase (PHGDH) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with phosphoglycerate dehydrogenase antibody (KVAb00427, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



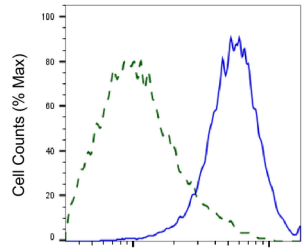
Western blotting analysis using phosphoglycerate dehydrogenase antibody (KVAb00427). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with phosphoglycerate dehydrogenase antibody (KVAb00427, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



Immunohistochemistry was performed on paraffin-embedded human glioblastoma using phosphoglycerate dehydrogenase antibody (KVAb00427, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of HeLa cells using Phosphoglycerate dehydrogenase antibody (KVAb00427, 1:1,000), Top panel: wild-type (WT); Bottom panal: Phosphoglycerate dehydrogenase shRNA knockdown (KD). Nuclei were stained blue with DAPI; Phosphoglycerate dehydrogenase was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Phosphoglycerate dehydrogenase-Alexa Fluor® 647

Validation of Phosphoglycerate dehydrogenase knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with Phosphoglycerate dehydrogenase antibody (KVAb00427, 1:2,000) and analyzed using BD flow cytometer.