Data Sheet (Cat.No.TMAY-02516)

TargetMol

Anti-PHGDH Antibody (7J468)

Product Details

Ig Type:	Mouse IgG2b
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7J468
Purification:	Protein A

Applications

Verified Activity:	1. Immunofluorescence staining of Human PHGDH in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with Mouse anti-Human PHGDH monoclonal antibody (1:60) at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 594-conjugated Goat Anti-mouse IgG secondary antibody (red). Positive staining was localized to cytoplasm. 2. Flow cytometric analysis of Human PHGDH expression on HeLa cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human PHGDH, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.
Application:	FCM,ICC/IF
Recommended	ICC-IF: 1:20-1:100; FCM: 1:25-1:100

Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human PGDH / PHGDH protein (TMPY-02801)
Antigen Species:	Human
Synonyms:	PGAD;3PGDH;NLS1;PDG;NLS;PGD;3-PGDH;SERA;phosphoglycerate dehydrogenase;HEL-S-113;PHGDHD;PGDH

Research Background

PHGDH is a member of the D-isomer specific 2-hydroxyacid dehydrogenase family. This new family consists of D-isomer-stereospecific enzymes. The conserved residues in this family appear to be the residues involved in the substrate binding and the catalytic reaction, and thus to be targets for site-directed mutagenesis. A number of NAD-dependent 2-hydroxyacid dehydrogenases which seem to be specific for the D-isomer of their substrate have been shown to be functionally and structurally related. PHGDH 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. Overexpression of PHGDH may cause certain breast cancers. Defects in PHGDH are the cause of phosphoglycerate dehydrogenase deficiency which is characterized by congenital microcephaly, psychomotor retardation, and seizures.

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