Data Sheet (Cat.No.TMAH-00474)

Anti-GAPDH Antibody (5Z282)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	5Z282
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: HepG2 whole cell lysate,U87 whole cell lysate,JK whole cell lysate -All lanes: GAPDH antibody at 1:500 -Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution -Predicted band size: 36 kDa -Observed band size: 36 kDa 2. IHC image of TMAH-00474 diluted at 1:50 and staining in paraffin-embedded human placenta tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB. 3. Immunofluorescence staining of HepG2 cell with TMAH-00474 at 1:20, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L). 4. Overlay Peak curve showing Hela cells surface stained with TMAH-00474 (red line) at 1:50. The cells were fixed in 4% formaldehyde (15min) and permeated by 0.2% TritonX-100 for 10min. Then 10% normal goat serum was Incubated to block non-specific protein-protein interactions followed by the antibody (1μg/1*10^6 cells) for 45 min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/200 dilution for 35 min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA,FCM,IF,IHC,WB
Recommended	WB:1:1000-1:5000; IHC:1:20-1:200; IF:1:20-1:200; FCM:1:20-1:200.

Properties

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

Antigen Details

Immunogen:	Recombinant Protein: Human GAPDH Protein
Antigen Species:	Human
Gene ID:	2597
Uniprot ID:	P04406
Synonyms:	G3PD;glyceraldehyde-3-phosphate dehydrogenase;GAPD;HEL-S-162eP
Biology Area:	Isotype/Loading Controls, Neuroscience, Cancer, Metabolism, Signal transduction

Research Background

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. Modulates the organization and assembly of the cytoskeleton. Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation. Also plays a role in innate immunity by promoting TNF-induced NF-kappa-B activation and type I interferon production, via interaction with TRAF2 and TRAF3, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC.

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