

GAPDH

rev. 07/17/15

Cat#: EM1101

Product Type: Mouse monoclonal IgM, primary antibodies

Isotype: IgM **Clone ID:** 5-E10

Species reactivity: H, M, R, Rabbit, Zebrafish, Hybrid fish (crucian-carp)

Applications: ICC, WB

Molecular Wt.: 36 kDa

Description: GAPDH (Glyceraldehyde-3-phosphate dehydrogenase) has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. It participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. GAPDH 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.

Specificity/Source

This antibody is produced by immunizing mice with a synthetic peptide (KLH-coupled) corresponding to a region of GAPDH.

Positive control:

HepG2, Hela, PC12, NIH/3T3, MCF-7, Rabbit liver, Zebrafish, F9, hybrid fish (crucian-carp) liver tissue lysate.

Subcellular location:

Cytoplasm

Database links:

SwissProt: P04406(Human) P16858(Mouse) P04797(Rat)
P46406(Rabbit) Q5XJ10(Zebra fish)

Recommended Dilutions:

WB: 1:5,000-1:10,000

ICC: 1:200

Storage Buffer:

1*TBS (pH7.4), 0.5%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction:

Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Purity:

ProL affinity purified

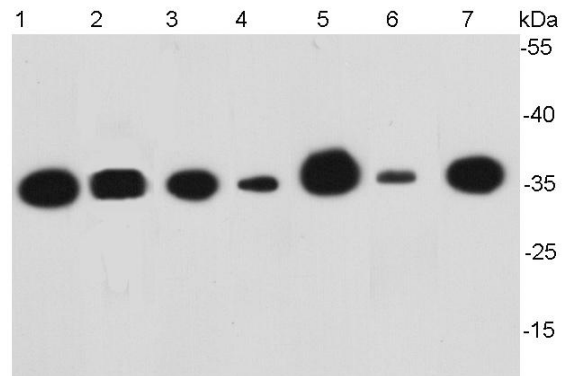


Fig1: Western blot analysis of GAPDH on different cell lysates using anti-GAPDH antibody at 1/5000 dilution.

Positive control:

Lane 1: HepG2 Lane 2: Hela

Lane 3: PC12 Lane 4: NIH/3T3

Lane 5: MCF-7 Lane 6: Rabbit liver

Lane 7: Zebrafish

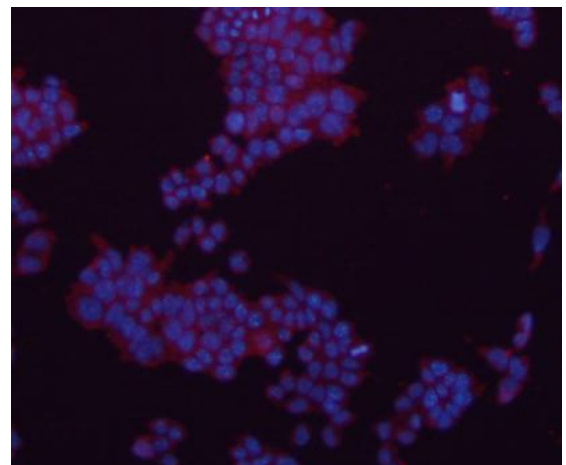


Fig2: ICC staining GAPDH in F9 cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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Applications: WB=Western IP=Immunoprecipitation IHC=Immunohistochemistry IF=Immunofluorescence FC=Flow cytometry
Species Cross-Reactivity: H=human M=mouse R=rat Hm=hamster Mk=monkey Mi=mink C=chicken Dm=D.melanogaster X=Xenopus Z=zebrafish
B=bovine Dg=dog Pg=pig Sc=S.

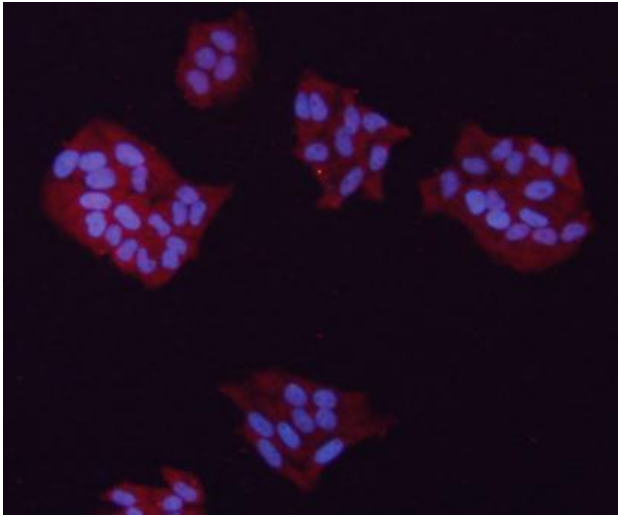


Fig3: ICC staining GAPDH in Hela cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

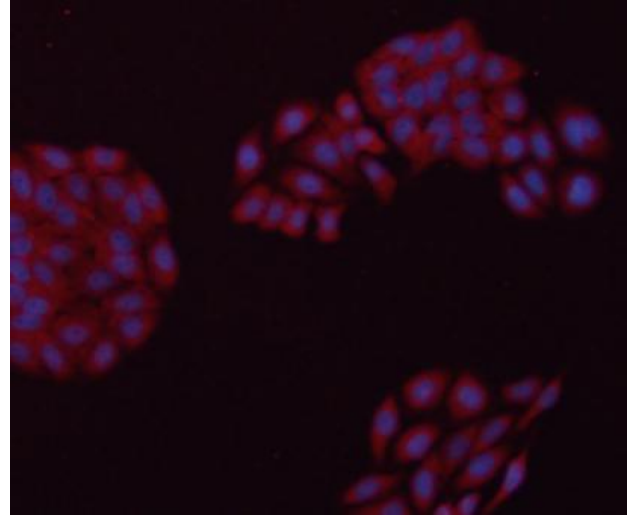


Fig4: ICC staining GAPDH in HepG2 cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

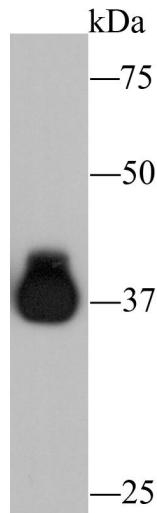


Fig5: Western blot analysis of GAPDH on hybrid fish (crucian-carp) liver tissue lysate using anti-GAPDH antibody at 1/500 dilution.

Background References

1. "The glyceraldehyde 3 phosphate dehydrogenase gene family: structure of a human cDNA and of an X chromosome linked pseudogene; amazing complexity of the gene family in mouse." Hanauer A., Mandel J.-L. EMBO J. 3:2627-2633(1983)
2. "Enhanced expression of a glyceraldehyde-3-phosphate dehydrogenase gene in human lung cancers." Tokunaga K., Nakamura Y., Sakata K., Fujimori K., Ohkubo M., Sawada K., Sakiyama S. Cancer Res. 47:5616-5619(1986)
3. "Glyceraldehyde-3-phosphate dehydrogenase is phosphorylated by protein kinase Ciota /lambda and plays a role in microtubule dynamics in the early secretory pathway." Tisdale E.J.J. Biol. Chem. 277:3334-3341(2001)

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