



Catalog Number: MO25038

Host: Mouse

Product Type: IgM
Clone: 1D4

Species Reactivity: Human, Cow, Pig,
Mouse, Rat, Bovine and
Chicken

Immunogen Sequence: Extensively purified pig GAPDH.

Format: 100 ul Tissue culture
supernatant Mouse
ascites with 10 mM
sodium azide.
Concentration 1
mg/ml/

Applications: Immunohistochemistry: 1:100
Western Blot: 1:1000

Storage: Dilutions listed as a recommendation. Optimal dilution should be determined by investigator. Store frozen. Aliquot as undiluted antisera and immediately place at -20°C. Antisera may have become trapped in top of vial during shipping. Centrifugation of vial is recommended before opening. Stable for at least 6 months at -20°C. Repeated freeze/thaw cycles compromise the integrity of the antiserum.

Application Notes

GAPDH can be used in western blot and immunocytochemical experiments. On blots, the antibody reveals a prominent ~37kDa band, and on cells in tissue culture the antibody stains in a punctate cytoplasmic.

Description/Data:

GAPDH is a 146 kDa tetramer composed of four 30-40 kDa subunits. Glyceraldehyde 3-Phosphate Dehydrogenase (GAPDH) is a metabolic enzyme responsible for catalyzing one step in the glycolytic pathway, the reversible oxidative phosphorylation of glyceraldehyde 3-phosphate. Because GAPDH is a protein expressed in large amounts and which is required at all times for an important house keeping functions, levels of GAPDH mRNA are often used as standards in studies of mRNA expression. Increasingly, scientists are making use of specific antibodies to GAPDH as loading controls for western blotting experiments. Apart from a role in glycolysis, GAPDH may have other roles such as in the activation of transcription. GAPDH is reported to bind to a variety of other proteins, including the amyloid precursor protein, mutations in which cause some forms of Alzheimer's disease, and the polyglutamine tracts of Huntingtin, the protein product aberrant forms of which are causative of Huntington's disease. Associations with actin and tubulin have also been reported. The protein may also have a role in the regulation of apoptosis, and interestingly migrates from the cytoplasm into the nucleus when cells become apoptotic.

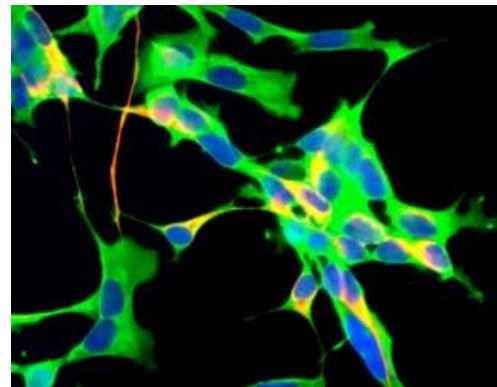


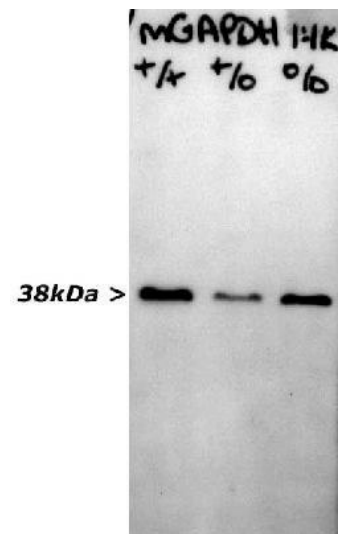
Image: Human neuroblastoma line Sh-SY5Y stained with anti-GAPDH (green) and NF-H (red), counterstained with a fluorescent DNA probe (blue).

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Image: Sciatic nerves of mouse wild type (+/+), heterozygous (+/o) and homozygous (o/o) for knock out of peripheral myelin protein 21 (pmp21) were homogenized in SDS-PAGE sample buffer and run out for GAPDH western blots. Dilution was 1:1000. Signals were revealed in a few seconds with chemiluminescence, indicating that lower antibody concentrations would also have worked well. Note the sharp clear band at 38kDa, the expected molecular weight for GAPDH.



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