# 3-磷酸甘油醛脱氢酶单克隆抗体(内参抗体)

**产品货号：** mM0978

**英文名称：** GAPDH(3E12)-Loading Control

**中文名称：** 3-磷酸甘油醛脱氢酶单克隆抗体(内参抗体)

**别　　名：** 38 kDa BFA-dependent ADP-ribosylation substrate; Aging-associated gene 9 protein; BARS-38; cb609; EC 1.2.1.12; G3PD; G3PDH; GAPD; Glyceraldehyde 3 phosphate dehydrogenase;Glyceraldehyde 3 phosphate dehydrogenase liver;Glyceraldehyde 3 phosphate dehydrogenase muscle; KNC-NDS6; MGC102544; MGC102546; MGC103190; MGC103191; MGC105239; MGC127711; MGC88685; OCAS, p38 component; OCT1 coactivator in S phase, 38-KD component; wu:fb33a10.

**产品类型：** 内参抗体

**研究领域：** 肿瘤　免疫学　神经生物学　信号转导　通道蛋白　新陈代谢　Alzheimer's

**抗体来源：** Mouse

**克隆类型：** Monoclonal

**克 隆 号：** 3E12

**交叉反应：** Human, Mouse, Rat, Rabbit,

**产品应用：** WB=1:1000-5000 IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500 （石蜡切片需做抗原修复）

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

**分 子 量：** 38kDa

**细胞定位：** 细胞核 细胞浆 细胞膜

**性　　状：** Lyophilized or Liquid

**浓　　度：** 1mg/ml

**免 疫 原：** Full length GAPDH protein purified from rabbit muscle:

**亚　　型：** IgG

**纯化方法：** affinity purified by Protein G

**储 存 液：** 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

**保存条件 ：** Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

**PubMed :** PubMed

**产品介绍 ：** Loading Control

Glyceraldehyde 3 phosphate dehydrogenase (GAPDH) is well known as one of the key enzymes involved in glycolysis. As well as functioning as a glycolytic enzyme in cytoplasm, recent evidence suggests that mammalian GAPDH is also involved in a great number of intracellular proceses such as membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication, and DNA repair. During the last decade a lot of data appeared concerning the role of GAPDH in different pathologies including prostate cancer progression, programmed neuronal cell death, age related neuronal diseases, such as Alzheimer's and Huntington's disease. GAPDH is expressed in all cells. It is constitutively expressed in almost all tissues at high levels. There are however some physiological factors such as hypoxia and diabetes that increase GAPDH expression in certain cell types. GAPDH molecule is composed of four 36kDa subunits.

**Function:**

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, 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. 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.

**Subunit:**

Homotetramer. Interacts with TPPP; the interaction is direct. Interacts (when S-nitrosylated) with SIAH1; leading

to nuclear translocation. Interacts with RILPL1/GOSPEL, leading to prevent the interaction between GAPDH and SIAH1 and prevent nuclear translocation. Interacts with EIF1AD, USP25, PRKCI and WARS.

**Subcellular Location:**

Cytoplasm, cytosol. Nucleus. Cytoplasm, perinuclear region. Membrane. Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal. Postnuclear and Perinuclear regions.

**Post-translational modifications:**

S-nitrosylation of Cys-152 leads to interaction with SIAH1, followed by translocation to the nucleus.

ISGylated (Probable).

Sulfhydration at Cys-152 increases catalytic activity.

**Similarity:**

Belongs to the glyceraldehyde-3-phosphate dehydrogenase family.

**SWISS**:

P46406

**Gene ID:**

100009074

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

GAPDH 蛋白几乎在所有组织中都高水平表达，广泛用作 Western blot 蛋白质标准化的内参,是很好的内参抗体。

GAPDH 作为管家基因在同种细胞或者组织中的蛋白质表达量一般是恒定的。在实验中，可能存在总蛋白浓度测定不准确；或者蛋白质样品在电泳前上样时产生的样品间的操作误差；这些误差需要通过测定每个样品中实际转到膜上的 GAPDH 的含量来进行校正，所以一般的 western 实验都需要进行内参设置。具体校正的方法就是将每个样品测得的目的蛋白含量与本样品的 GAPDH 含量相除，得到每个样品目的蛋白的相对含量。然后才进行样品与样品之间的比较。

甘油醛-3-磷酸脱氢酶（Glyceraldehyde 3 phosphate dehydrogenase，GAPDH）是糖酵解（glycolysis）过程中的关键酶。除了在胞质中作为糖酵解的酶以外，有证据表明哺乳动物细胞中的 GAPDH 参与了多种胞内生化过程，包括膜融合（membrane fusion）、微管成束（microtubule bundling）、磷酸转移酶（phosphotransferase）激活、核内 RNA 出核、DNA 复制与 DNA 修复。一些生理因素，诸如低氧（hypoxia）和尿糖（diabetes），可以增加 GAPDH 在特定细胞中的表达。GAPDH 存在于几乎所有的组织中，以高水平持续表达。

GAPDH（甘油醛-3-磷酸脱氢酶）是参与糖酵解的一种关键酶，由 4 个 30－40kDa 的亚基组成.

**产品图片 ：**