

# KD-Validated Anti-GAPDH Rabbit Polyclonal Antibody

Rabbit polyclonal antibody

Catalog # AGI2001

## Product Information

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| <b>Application</b>       | WB                                                                                                                                                                                                                                                                                                           |
| <b>Primary Accession</b> | <a href="#">P04406</a>                                                                                                                                                                                                                                                                                       |
| <b>Reactivity</b>        | Rat, Human, Mouse                                                                                                                                                                                                                                                                                            |
| <b>Clonality</b>         | Polyclonal                                                                                                                                                                                                                                                                                                   |
| <b>Isotype</b>           | Rabbit IgG                                                                                                                                                                                                                                                                                                   |
| <b>Calculated MW</b>     | 36053                                                                                                                                                                                                                                                                                                        |
| <b>Gene Name</b>         | GAPDH                                                                                                                                                                                                                                                                                                        |
| <b>Aliases</b>           | GAPDH; Glyceraldehyde-3-Phosphate Dehydrogenase; GAPD; Peptidyl-Cysteine S-Nitrosylase GAPDH; EC 1.2.1.12; Epididymis Secretory Sperm Binding Protein Li 162eP; Oct1 Coactivator In S Phase, 38 Kd Component; Aging-Associated Gene 9 Protein; OCAS, P38 Component; HEL-S-162eP; EC 2.6.99.-; EC 1.2.1; G3PD |
| <b>Immunogen</b>         | A synthesized peptide derived from human GAPDH                                                                                                                                                                                                                                                               |

## Additional Information

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| <b>Gene ID</b>     | 2597                                                                                                                                                                           |
| <b>Other Names</b> | Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, 1.2.1.12, Peptidyl-cysteine S-nitrosylase GAPDH, 2.6.99.-, GAPDH {ECO:0000303   PubMed:2987855, ECO:0000312   HGNC:HGNC:4141} |

## Protein Information

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| <b>Name</b>     | GAPDH {ECO:0000303   PubMed:2987855, ECO:0000312   HGNC:HGNC:4141}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Function</b> | Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed: <a href="#">11724794</a> , PubMed: <a href="#">3170585</a> ). Also shows nitrosylase activity, thereby playing a role in nuclear functions (PubMed: <a href="#">11724794</a> , PubMed: <a href="#">3170585</a> ). Modulates the organization and assembly of the cytoskeleton (By similarity). Facilitates the CHP1- dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules (By similarity). Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes (PubMed: <a href="#">23071094</a> ). 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 (PubMed: <a href="#">23071094</a> ). 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 (PubMed:[23332158](#), PubMed:[27387501](#)). Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis (By similarity). Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC (By similarity).

#### **Cellular Location**

Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity). Postnuclear and Perinuclear regions (PubMed:12829261) {ECO:0000250|UniProtKB:P04797, ECO:0000269|PubMed:12829261}

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