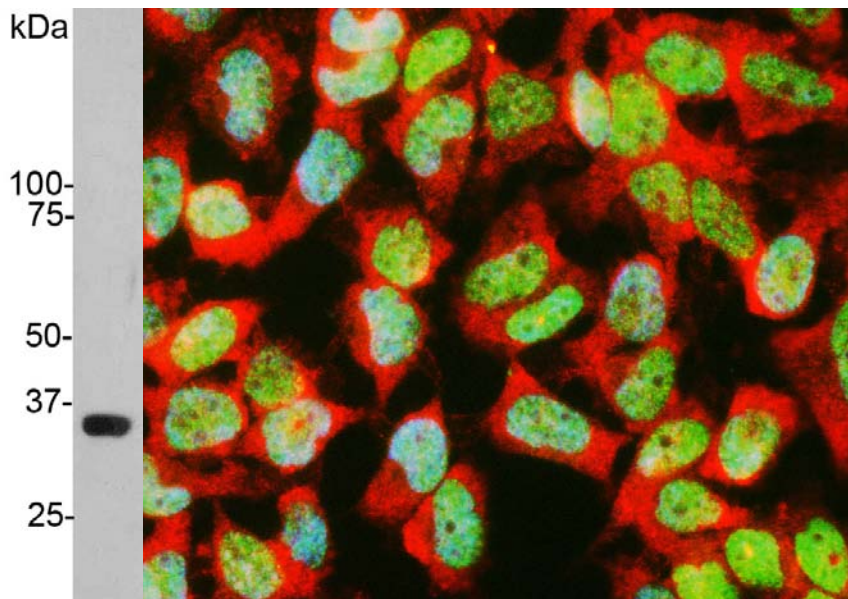


**Catalogue # RPCA-GAPDH: Polyclonal Antibody reactive with Glyceraldehyde 3 Phosphate Dehydrogenase.**

**The Immunogen:** 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 as 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 measured and used as standards in studies of mRNA expression. Increasingly, scientists are making use of specific antibodies to GAPDH in comparable studies of levels of protein expression. This antibody can be used as a loading control for western blotting experiments, allowing comparison between the level of this protein and others in a cell or tissue. Apart from a role in glycolysis, GAPDH may have other roles such as in the activation of transcription (1). 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 (2,3). 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 (4). The immunogen used to raise this particular antibody was extensively purified pig GAPDH. As with our monoclonal antibody to GAPDH, [MCA-1D4](#), this antibody can be used as a western blotting standard. See references 5-25 for the use of MCA-1D4 in this way. The [HGNC](#) name for this protein is [GAPDH](#).

Antibody was raised in rabbit against extensively purified pig GAPDH. The antibody is provided in the form of crude rabbit serum. This antibody is known to react with GAPDH from human, cow, mouse, rat and other mammals. RPCA-GAPDH specifically recognizes GAPDH both in western blots and in immunocytochemical experiments. On blots RPCA-GAPDH reveals a prominent ~36kDa band, and on cells in tissue culture the antibody stains in a punctate cytoplasmic fashion. Since GAPDH is one of the most conserved proteins known, it is likely that the antibody is effective on other species also.



**Left:** Blot of HeLa blotted with RPCA-GAPDH. Note the single clean band at 36 kDa corresponding to GAPDH.  
**Right:** HeLa cells stained with RPCA-GAPDH (red) and counterstained with EnCor's monoclonal antibody to TAF15, [MCA-4D71](#) (green) and DNA (blue). The RPCA-GAPDH antibody reveals strong cytoplasmic staining, while MCA-4D71 antibody reveals a granular nuclear localization.

**Antibody characteristics:** RPCA-GAPDH recognizes GAPDH specifically both in western blots and in immunocytochemical experiments. On blots RPCA-GAPDH binds to a prominent ~38 kDa band, and on cells in tissue culture the antibody stains in a punctate cytoplasmic fashion, (for images of blots and cell staining see EnCor web site). RPCA-GAPDH is known to react with GAPDH from human, cow, pig, mouse, rat and other mammals, and also recognizes avian GAPDH. Since GAPDH is one of the most conserved proteins known, it is likely that the antibody is effective on other species also.

**Suggestions for use:** The antibody is in the form of a crude serum. The antibody can be used at dilutions of at least 1:500 in immunofluorescence experiments. In western blotting using chemiluminescence it can be used at dilutions of 1:2,500 or lower. It is also useful as a loading control for quantitative western blotting. Avoid repeated freezing and thawing: store at 4°C or -20°C.

**Limitations:** This product is for research use only and is not approved for use in humans or in clinical diagnosis.

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