

PIK3R1 Antibody

Purified Mouse Monoclonal Antibody Catalog # AO1752a

Product Information

Application WB, IHC, FC, ICC, E

Primary Accession <u>P27986</u>

Reactivity Human, Mouse

HostMouseClonalityMonoclonalClone Names6G10IsotypeIgG1Calculated MW83598

Description Phosphatidylinositol 3-kinase phosphorylates the inositol ring of

phosphatidylinositol at the 3-prime position. The enzyme comprises a 110 kD catalytic subunit and a regulatory subunit of either 85, 55, or 50 kD. This gene encodes the 85 kD regulatory subunit. Phosphatidylinositol 3-kinase plays an important role in the metabolic actions of insulin, and a mutation in this gene has been associated with insulin resistance. Alternative splicing of this gene

results in four transcript variants encoding different isoforms.

Immunogen Purified recombinant fragment of human PIK3R1 (AA: 159-388) expressed in

E. Coli.

Formulation Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID 5295

Other Names Phosphatidylinositol 3-kinase regulatory subunit alpha, PI3-kinase regulatory

subunit alpha, PI3K regulatory subunit alpha, PtdIns-3-kinase regulatory subunit alpha, Phosphatidylinositol 3-kinase 85 kDa regulatory subunit alpha, PI3-kinase subunit p85-alpha, PtdIns-3-kinase regulatory subunit p85-alpha,

PIK3R1, GRB1

Dilution WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A

E~~1/10000

Storage Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions PIK3R1 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name PIK3R1

Synonyms GRB1

Function Binds to activated (phosphorylated) protein-Tyr kinases, through its SH2

domain, and acts as an adapter, mediating the association of the p110 catalytic unit to the plasma membrane. Necessary for the insulin-stimulated increase in glucose uptake and glycogen synthesis in insulin-sensitive tissues. Plays an important role in signaling in response to FGFR1, FGFR2, FGFR3, FGFR4, KITLG/SCF, KIT, PDGFRA and PDGFRB. Likewise, plays a role in ITGB2 signaling (PubMed:17626883, PubMed:19805105, PubMed:7518429). Modulates the cellular response to ER stress by promoting nuclear translocation of XBP1 isoform 2 in a ER stress- and/or insulin-dependent manner during metabolic overloading in the liver and hence plays a role in

glucose tolerance improvement (PubMed: 20348923).

Tissue Location Isoform 2 is expressed in skeletal muscle and brain, and at lower levels in

kidney and cardiac muscle. Isoform 2 and isoform 4 are present in skeletal

muscle (at protein level)

References

1.Cancer Epidemiol Biomarkers Prev. 2011 May;20(5):923-33.2.Cancer Res. 2010 Jul 1;70(13):5305-15.

Images

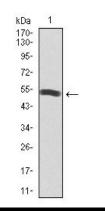


Figure 1: Western blot analysis using PIK3R1 mAb against human PIK3R1 recombinant protein. (Expected MW is 53.4 kDa)

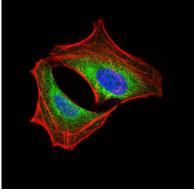
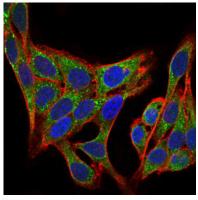


Figure 2: Immunofluorescence analysis of HeLa cells using PIK3R1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

Figure 3: Immunofluorescence analysis of HepG2 cells using PIK3R1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



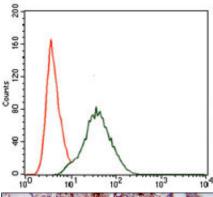


Figure 4: Flow cytometric analysis of NIH3T3 cells using PIK3R1 mouse mAb (green) and negative control (red).

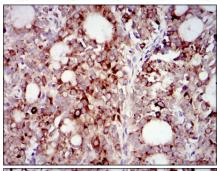


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using PIK3R1 mouse mAb with DAB staining.

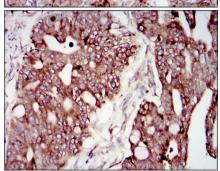


Figure 6: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using PIK3R1 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.