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Product Information

Anti-p190 RhoGAP (GK-18)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **R 2654**

Product Description

Anti-p190 RhoGAP (GK-18) is developed in rabbit using a synthetic peptide corresponding to amino acids 1131-1148 located near the C-terminus of rat p190 RhoGAP, conjugated to KLH, as immunogen. This sequence is identical in human, mouse and dog p190 RhoGAP. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-p190 RhoGAP (GK-18) specifically recognizes p190 RhoGAP (190 kDa). Applications include immunoblotting and immunoprecipitation. Staining of the p190 RhoGAP band in immunoblotting is specifically inhibited with the p190 RhoGAP immunizing peptide (rat, amino acids 1131-1148).

GTPases are members of a large family of proteins, including Ras, Rho, Rab, Arf and Ran GTPases, that control a wide variety of signal transduction pathways in all eukaryotic cells.¹ They play a central role in regulating the actin cytoskeleton, they influence cell polarity, microtubule dynamics, membrane transport pathways, cell cycle progression, transformation and transcription factor activity. GTPases are themselves regulated by GTPase-activating proteins (GAPs). The p190 RhoGAP protein (also termed p190A, Glucocorticoid receptor binding factor 1, GRLF1, 190 kDa) is associated with p120 RasGAP in growth factor activated and tyrosine kinase transformed cells.² It functions as a GTPase-activating protein (GAP) for the Rho and Rac family of proteins, that are involved in regulating the reorganization of cytoskeletal actin and membrane ruffling.^{3,4} p190 RhoGAP regulates axonal growth and guidance and is required for normal neural development.^{5,6} p190 RhoGAP contains three major regions: an N-terminal GTP binding domain with sequence homology to all known GTPases, a middle region that mediates binding to p120 RasGAP, and a C-terminal GAP domain that is similar to those found in Bcr gene product, n-chimerin and other small GTPases. p190 RhoGAP has been shown to be tyrosine phosphorylated by c-Src and v-Src both *in vitro* and *in vivo*.^{4,7,8} Tyrosine phosphorylation of p190 RhoGAP appears to regulate its interaction with p120 RasGAP, and has been postulated to provide a link between the Ras and Rho signaling pathways.

Reagent

The antibody is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 15 mM sodium azide as a preservative.

Antibody concentration: approx. 0.8 mg/mL

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A working concentration of 1-2 µg/mL is determined by immunoblotting, using a mouse brain extract (S1 fraction).

A working concentration of 1-2 µg/mL is determined by immunoblotting, using a whole cell extract of Madin-Darby canine kidney MDCK cell line or HeLa human epitheloid carcinoma cell line.

20-40 µg of the antibody can immunoprecipitate p190 RhoGAP protein from a MDCK cell lysate.

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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