

Product Information

Anti-ARF6 antibody

Mouse monoclonal, clone ARFAG
purified from hybridoma cell culture

Product Number **A5230**

Product Description

Anti-ARF6 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma ARFAG produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of human ARF6, conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Anti-ARF6 antibody, Mouse monoclonal recognizes human, bovine, canine, and rat ARF6 (~18 kDa). The product is useful in ELISA, immunoblotting, and immunocytochemistry.

The Arf family of proteins, which belong to the Ras family, are low molecular mass proteins capable of binding GTP. These proteins act to regulate membrane traffic and organelle structure. The mammalian members of this family are divided into three classes according to their amino acid sequence. Class I includes human Arf1 and Arf3, class II includes human Arf4 and Arf5 and class III includes only human Arf6.¹⁻⁴

Association of Arf proteins to membranes and their activity are mediated by myristoylation at their N-terminus end. The transition between the active and inactive forms of the protein is achieved by a cycle of GTP-binding (active form) and GTP hydrolysis (inactive form). Since Arf proteins do not have an intrinsic GTPase activity, Arf activation and inactivation are catalyzed by guanine nucleotide exchange factors (GEFs) that facilitate GTP binding and GTPase-activating proteins (GAPs) that catalyze GTP hydrolysis.¹⁻⁴

Arf6 is present at the plasma membrane and on endosomal membranes where it regulates the flow of trafficking into and out of the cell, and regulates the actin cytoskeleton on the plasma membrane. ARF6 activates phospholipase D (PLD) and phosphatidylinositol 4-phosphate 5-kinase (PIP5K) to generate phosphatidic acid and PIP₂

(phosphatidylinositol 4,5-bisphosphate), respectively. PIP₂ is localized to the plasma membrane and recruits a range of protein types as well as the ARP2/ARP3 actin polymerization machinery.¹⁻⁴

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is determined using MDCK total cell extract.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration test.

References

1. Donaldson, J.G., and Honda, A., *Bio. Soc. Trans.*, **33**, 639-642 (2005).
2. Claing, A., *Biochem. Cell Biol.*, **82**, 610-617 (2004).
3. Sabe, H., *J. Biochem.*, **134**, 485-489 (2003).
4. Donaldson, J.G., *J. Biol. Chem.*, **278**, 41573-41576 (2003).

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