Technical Bulletin

Anti-ARP3 Antibody, Mouse Monoclonal

Clone FMS338, purified from hybridoma cell culture

A5979

Product Description

Anti-ARP3 Monoclonal (mouse IgG2b isotype) is derived from the hybridoma FMS338 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with recombinant human ARP3. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2.

Anti-ARP3 Monoclonal recognizes human, canine, rat, and mouse ARP3 by ELISA, immunoblotting (40-45 kDa) and immunocytochemistry.[1]

Cell migration processes are mediated by changes in the polymerization state of actin filaments. The signal for these processes begins at the level of the cell surface receptors and is transferred via mediators such as Rac and Cdc42 through Wiskott-Aldrich Syndrome protein (WASP) down to the ARP2/3 complex of proteins. Activation of the actin nucleating activity is mediated by the interaction of domains at the C-terminal part of different WASP family members of proteins with actin-monomers and the ARP2/3 complex. It has been found that ARP2/3 complex and its activator Scar2 are involved in Golgi polarization in NIH 3T3 cells.[2, 3] However in primary astrocytes, Golgi polarization involves neither actin cytoskeleton or Arp2/3 complex nor any WASP-family of proteins.[3] In a different model, it was found that the ARP2/3 complex was necessary for neutrophil chemotaxis and phagocytosis.[4] By genetic and loss of function studies, it was demonstrated that Scar2 is the major regulator of the ARP2/3 complex rather than the WASP family of proteins, the latter having more restricted roles in specific cellular events.[5]

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 continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots. 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 before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: A working antibody concentration of 0.25-0.5 µg/mL is recommended using total cell extract of mouse myoblast C2 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Baldassarre, M., et al., Eur. J. Cell. Biol., 85, 1217-1231 (2006).
2. Magdalena, J., et al., Mol. Biol. Cell, 14, 670-684 (2003).
3. Etienne-Manneville, S., and Hall, A., Cell, 106, 489-498 (2001).
4. Singh, S., et al., J. Biol. Chem., 278, 36410-36417 (2003).
5. Vartiainen, M.K., et al., Curr. Opin. Cell Biol., 16, 174-181 (2004).

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