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Product Information

Anti-Coronin-1B
produced in rabbit, affinity isolated antibody

Product Number **SAB4200096**

Product Description

Anti-Coronin-1B is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human coronin-1B (GeneID 57175), conjugated to KLH. The corresponding sequence is highly conserved (single amino acid substitution) in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Coronin-1B specifically recognizes human, mouse, and rat coronin-1B. It can be used in several immunochemical techniques including immunoblotting (~66 kDa) and immunofluorescence. An additional band at ~50 kDa may be observed by immunoblotting. Detection of the coronin-1B band by immunoblotting is specifically inhibited by the coronin-1B immunizing peptide.

Coronin-1B (also known as CORO1B, coronin-2) belongs to the coronin family of WD40 repeat-containing proteins. Coronins appear to function primarily in association with the membrane cytosekeleton through interaction with F-actin and the Arp2/3 complex.[1] They localize to sub-membrane areas and regulate cell motility and cytoskeletal rearrangement. Coronin-1B is ubiquitously expressed and regulates cell dynamics at the leading edge of migrating fibroblasts by altering actin dynamics and architecture at the leading edge.[2,3] Coronin-1B has also been identified as an important factor in neurite outgrowth in a neuronal regeneration model.[4] Human coronin-1B interacts with the Arp2/3 complex *in vivo* and has been shown to specifically inhibit Arp2/3-induced actin nucleation. Coronin-1B antagonizes the activity of cortactin, a filament branch stabilizer. It disassembles Arp2/3-containing actin branches in lamellipodia by inducing Arp2/3 dissociation.[5] The interaction between coronin-1B and Arp2/3 is regulated by phosphorylation of coronin-1B at Ser^{2} via PKC, which attenuates the inhibitory effect of coronin-1B on Arp2/3.[3] Coronin-1B has been shown to affect cell motility by regulation of ADF/cofilin proteins at the leading edge. It targets the cofilin-activating phosphatase slingshot-1L to the leading edge, and thus indirectly regulates cofilin activity.[3]

Reagent

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

Antibody concentration: ~1.5 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

Store at –20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. 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 by centrifugation before use. Discard working dilutions if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1.5-3.0 μg/mL is recommended using PC12 cell extracts and mouse brain extracts (S1 fraction).

Immunofluorescence: a working antibody concentration of 5-10 μg/mL is recommended using HS68 cells.

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

References

1. Rybakin, V., and Clemens, C.S., *Bioessays*, **27**, 625-632 (2005).
2. Cai, L. et al., *J. Biol. Chem.*, **280**, 31913-31923 (2005).
3. Cai, L. et al., *Cell*, **128**, 915-929 (2007).
4. Di Giovanni, S., *J. Biol. Chem.*, **280**, 2084-2091 (2005).
5. Cai, L. et al., *Cell*, **134**, 828-842 (2008).

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