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Product Information

Anti-Radixin
produced in rabbit, affinity isolated antibody

Catalog Number **R3653**

Product Description

Anti-Radixin is produced in rabbit using a synthetic peptide corresponding to amino acid residues 400–409 of human radixin, with an N-terminal added tripeptide, conjugated to KLH as immunogen. The corresponding sequence is identical in mouse, rat, and pig, and differs by two amino acids in chicken. The antibody is affinity purified using the immunizing peptide immobilized on agarose.

Anti-Radixin recognizes human, mouse, and rat radixin. Applications include immunoblotting (~80 kDa), immunoprecipitation, and immunofluorescence staining of cultured cells. Additional weak bands may be detected when immunoblotting some extract preparations. Detection of radixin by immunoblotting is specifically inhibited with the immunizing peptide.

The ERM (ezrin-radixin-moesin) proteins are closely related members of the talin-protein 4.1 merlin/ schwannomin superfamily. They are general cross-linkers between the plasma membrane and actin filaments.[1-4] These proteins provide such links through their N-terminal halves that associate with integral membrane proteins, such as cell adhesion proteins and transporters, either directly or indirectly through adapter molecules, and through their C-terminal halves that associate with F-actin. ERM proteins are involved not only in cytoskeletal organization but also in signal transduction[1] and apoptosis.[5] Because their expression is regulated in a tissue-specific manner, each ERM protein has been proposed to have unique functions. On the other hand, experiments at the cellular level and *in vitro* have suggested their functional redundancy. ERM proteins are highly homologous, both in amino acid sequence and in functional activity. There is ~80% homology between moesin, ezrin, and radixin.[1,2] ERM proteins are involved in a variety of cellular functions such as cell adhesion, cell shape determination, migration, and the organization of cell surface structures. ERM proteins are mainly concentrated in specialized micro-domains and localized in the intracellular core of microextensions known as filopodia, microvilli, microspikes, and retraction fibers.

The subcellular distribution of these proteins closely follows the dynamic changes in cell shape that take place when cells attach, spread, and move spontaneously or in response to extracellular signals.[1-4] There is a considerable variation in the cellular and subcellular localization of ERM proteins in different cells and tissues. Radixin is the dominant ERM protein in liver bile canaliculi where it is considered to have a critical role in bile conjugated-bilirubin secretion by influencing the cellular localization of the multidrug protein MRP2.[6] Resting normal human blood cells, which express one or more of the other ERM proteins, lack detectable radixin.[7] Yet, radixin is found in classical NK cells.[8] Like ezrin and moesin, radixin has closed and open forms corresponding to the inactive and active forms as cross-linkers between actin filaments.[9] It may be phosphorylated[10] and it plays an important role in the activation of the Rho family members by recruiting their positive and negative regulators.[11]

Reagent

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

Antibody Concentration: ~0.8 mg/ml

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material 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 extended 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.0–2.0 μg/ml is determined using a whole extract of cultured mouse NIH 3T3 cells and a chemiluminescence detection reagent.

Immunoblotting: a working concentration of 1.0-2.0 μg/ml is determined using a whole extract of cultured HeLa cells and a chemiluminescence detection reagent. Additional bands may appear in some extract preparations.

Immunoprecipitation: 10–20 μg of the antibody immunoprecipitates radixin from 250 μg of RIPA extract of rat liver.

Indirect immunofluorescence: a working concentration of 10–20 μg/ml is determined using cultured human HeLa cells.

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

References

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DS,PHC 08/13-1