

Rabbit Anti-human Merlin Polyclonal Antibody

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Technology description

Summary

The neurofibromatosis type 2 (NF2) tumor suppressor gene was cloned in 1993. It encodes a protein product, merlin. Mutation of merlin is associated with development of tumors known as schwannomas, which arise from the 8th cranial nerve. Patients of NF2 are also predisposed to other nervous system tumors such as ependymomas, meningiomas and mesotheliomas. Merlin is related to the ezrin-radixin-moesin (ERM) family of proteins, which are known to link the plasma membrane of cells to their cytoskeleton. Current evidence points to merlin as part of several signal transduction pathways that regulate cell growth. As the functional inactivation or loss of merlin leads to tumor formation, merlin is a classic tumor suppressor molecule.

The study of the tumor suppressing mechanism of merlin is currently hampered by a paucity of specific antibody reagents. Although many commercial antibodies exist for the ERM proteins, none to our knowledge are available that are highly specific for merlin.

We generated purified recombinant merlin protein using a combination of standard laboratory techniques. The resultant protein appeared as a single band on SDS-PAGE gels and was used as immunogen to elicit antibody production in New Zealand white rabbits.

Advantages

By western blotting, our merlin antibody, designated Montibody, revealed a single band at approximately 69 kDa, the predicted molecular mass of human merlin. This degree of specificity surpasses that of all known commercially available products.

The antibody recognizes human, mouse and rat merlin, and is effective in in western blot analysis at 1000x dilution and in immunoprecipitation studies. Since the antibody recognizes endogenous merlin, it obviates the need for epitope- or green fluorescent protein-tagged merlin in such studies.

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