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Mapping of the gene for Nischarin, a Novel Integrin Binding Protein, to Chromosome 3 by Fluorescence In Situ Hybridization

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ABSTRACT Recently, we have reported the cloning and characterization of a novel protein, Nischarin that associates with a5 integrin *in vitro* and *in vivo*. Nischarin appears to have a negative regulatory function in cell migration by antagonizing the actions of Rho GTPases on cytoskeletal organization and cell movement. I now report chromosomal localization of the gene for mouse Nischarin. Fluorescence In Situ Hybridization (FISH) analysis of metaphase chromosomes derived from mouse embryo fibroblast cells revealed that Nischarin is localized to chromosome 3. Also further labeling of the telomere and middle portion of chromosome 3 indicated that the gene position is 53% of the distance from the heterochromatic boundary to the telomere of chromosome 3, corresponding to 3F1-F2-1. Mouse chromosome 3 seems to share a region of homology with the human chromosome 3, however the homologous genes mapped so far are all on human 3q. Interestingly, the human homolog of Nischarin has been mapped to chromosome 3p. The possibilities for this conundrum between human and mouse genomes are also discussed.

Home Back