

Immunocytochemical demonstration of a new vimentin-associated protein in 3T3 fibroblasts

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摘要

Abstract

Using a xanthophore cytoskeletal preparation as immunogen, we have produced a monoclonal antibody, A2, which recognized a 160 kDa protein in 3T3 fibroblasts. This protein makes up a cytoplasmic filamentous system, which colocalizes with vimentin filaments. When microtubules and actin filaments are dissolved by high salt extraction, staining with antibody A2 is unaffected. Immunoblot analysis confirms that the 160 kDa protein is co-isolated with vimentin during *in vivo* high salt extraction. Following vinblastine treatment, both the 160 kDa protein and vimentin become localized to perinuclear caps, as do other intermediate filaments and their associated proteins; after vinblastine removal, the immunostaining produced by A2 becomes filamentous. Immunoelectron microscopy demonstrates that antibody A2 stains a filament system with a diameter of about 10 nm. Our observations suggest that the 160 kDa protein may be a new vimentin-associated protein which differs from the intermediate filament-associated proteins previously reported, and is widely distributed in several cell types