

Carboxyl terminal sequences of β -tubulin involved in the interaction of HMW-MAPs. Studies using site-specific antibodies

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After the finding of the involvement of the C-terminal moieties of tubulin subunits in the interaction of MAPs, different studies have focused on the substructure of the binding domains for the different MAPs. Current biochemical evidence point to the role of a low-homology sequence between α and β -subunits within the conserved region of the C-terminal domain of tubulin, in the binding of AMP-2 and tau. Another line of studies indicates that a site for interaction of the high molecular weight MAPs is located in the variable region defined by the glutamic-rich C-terminus of β -tubulin. Here, we report the usefulness of idiotypic site-directed antibodies, produced by immunization with peptides from different β -tubulin isoforms, to study both MAP-1 and MAP-2 binding sites on tubulin. On the basis of these results with site-specific antibodies along with previous structural information (Cross et al. 1991, *Biochemistry* 30: 4362-4366), we propose the role of consensus sequences, from the inva