Title (en)

METHOD FOR ISOLATING SUBPOPULATIONS OF PROTEINS THAT ENGAGE IN PROTEIN-PROTEIN INTERACTIONS

Title (de)

VERFAHREN ZUR ISOLIERUNG VON UNTERPOPULATIONEN VON PROTEINEN, DIE IN PROTEIN-PROTEIN-WECHSELWIRKUNGEN EINGREIFEN

Title (fr)

PROCEDE D'ISOLEMENT DE SOUS-POPULATIONS DE PROTEINES IMPLIQUEES DANS LES INTERACTIONS PROTEINE-PROTEINE

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Application

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Abstract (en)

[origin: WO2004019967A1] The invention provides a method for isolating and identifying proteins participating in protein-protein interactions in a complex mixture. The method uses a chemically reactive supporting matrix to isolate proteins that in turn non-covalently bind other proteins. The supporting matrix is isolated, and the non-covalently bound proteins are subsequently released for analysis. Because the proteins are accessible to chemical manipulation at both the binding and release steps, identification of the non-covalently bound proteins yields information on specific classes of interacting proteins, such as calcium-dependent or substrate-dependent protein interactions. This permits selection of a subpopulation of proteins from a complex mixture on the basis of specified interaction criteria. The method has the advantage of screening the entire proteome simultaneously, unlike two-hybrid systems or phage display methods which can only detect proteins binding to a single bait protein at a time. The method is applicable to the study of protein-protein interactions in biopsy and autopsy specimens, to the study of protein-protein interactions in the presence of signalling molecules, pharmacological agents or toxins, and for comparison of diseased and normal tissues or cancerous and untransformed cells.

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