

Solubilization of SV40 Plasma Membrane-Associated Large Tumor Antigen Using Single-Phase Concentrations of 1-Butanol

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The nature of the interaction of the simian virus 40 (SV40) transforming protein, large tumor antigen (T_{ag}), with the plasma membrane of transformed cells is not well understood. We report here that SV40 plasma membrane-associated large tumor antigen (pmT_{ag}) can be solubilized by using single-phase concentrations of 1-butanol. Purified plasma membranes from SV40-transformed mouse cells yielded T_{ag} when treated with 2.5% butanol; solubilization of T_{ag} from the purified membranes in butanol was temperature dependent, with approximately 10-fold more T_{ag} extracted at 37°C than at 22°C; and application of 2.5% butanol to mKSA cells after cellular surface proteins had been radiolabeled with ¹²⁵I resulted in the release of iodinated T_{ag}.

Butanol-extracted pmT_{ag} coprecipitated with p53 and several cellular proteins ranging in size from 35 to 60 kDa. One cellular component migrated at a mobility similar to that of tubulin (56 kDa), and a monoclonal antibody against the α subunit of tubul