A new variant of glycoprotein CD44 confers metastatic potential to rat carcinoma cells.

Using a monoclonal antibody (MAb1.1ASML) raised against a surface glycoprotein of the metastasizing rat pancreatic carcinoma cell line BSp73ASML, cDNA clones have been isolated that encode glycoproteins with partial homology to CD44, a presumed adhesion molecule. In one of the clones, pMeta-1, the epitope marks an additional extracellular domain of 162 amino acids inserted into the rat CD44 protein between amino acid positions 223 and 247 (by analogy to human and murine CD44). The new variants are expressed only in the metastasizing cell lines of two rat tumors, the pancreatic carcinoma BSp73 and the mammary adenocarcinoma 13762NF; they are not expressed in the non-metastasizing tumor cell lines nor in most normal rat tissues. Overexpression of pMeta-1 in the nonmetastasizing BSp73AS cells suffices to establish full metastatic behavior.