CD54 (ICAM-1: Intercellular Adhesion Molecule 1) is a transmembrane glycoprotein of the immunoglobulin superfamily of adhesion molecules. CD54 expression is constitutive on many cell types. CD54 is a inducible ligand for LFA-1 (lymphocyte function associated antigen) and functions cell-to-cell interactions in inflammatory and immune responses. Some studies have showed that the elevated expression of CD54 occurred in a variety of diseases, including autoimmune diseases, endocrine diseases, and some cancers as gastric, pancreatic, breast cancer. Surface expressed CD54 is apparently shed from the cells and then circulates as soluble ICAM-1 (sICAM-1). sICAM-1 can compete with cell surface CD54 to bind LFA-1 on T lymphocytes. Shedding of CD54 by circulating tumor cells may allow their escape from surveillance by cytotoxic T and natural killer cells, and promote metastasis. It has been suggested that sICAM-1 levels were found to be related tumor presence, clinical stages, and grade. 

Role of ICAM1 in invasion of human breast cancer cells.

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This antibody is specific to human CD54 and will be useful for FCM, immunoprecipitation.

Reference