A mouse IgM monoclonal antibody recognized breast and colon cancer.

ABSTRACT

Hybridoma clone C3A8, which is a fusion product between splenic lymphocytes of Balb/c mice immunized with MCF7 breast carcinoma cells and SP2/0 myelomas, was produced and characterized. A stable clone that secreted IgM monoclonal antibody (MAb) with κ light chain was obtained through limiting dilutions. Cell-ELISA screening, flow cytometry analysis, and immunofluorescence staining revealed that the MAb C3A8 had bound specifically and strongly to MCF7 and HT29 but cross reacted weakly or not on HeLa cell line. The MAb C3A8 reacted positively with paraffin-embedded tissues of human breast and colon cancers but there were no positive reactions on normal tissues. Western blot analysis showed the MAb recognized a 55 kDa protein, which was present in the extract of MCF7 and HT29 cell lines. Our results demonstrated that MAb C3A8 could be used for basic and clinical research of breast and colon cancers.

Keyword: Antibodies; Assay/immunoassay; Cancer; Hybridoma; Immunofluorescene.