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Anti-MUC-1 Monoclonal Antibody

National Cancer Institute

Source

National Cancer Institute. *Anti-MUC-1 Monoclonal Antibody*. NCI Thesaurus. Code C29983.

A monoclonal antibody recognizing human mucin, a cell surface antigen encoded by the MUC-1 gene. In normal tissue, mucin exists as heavily glycosylated form, while tumor-associated mucin molecules are hypo-glycosylated. Hypo-glycosylation exposes the normally cryptic tandem peptide repeats in cancer-associated mucin, thereby allows antigen-antibody interaction with MUC-1 antibody. As a result, the MUC-1 antibody inhibits the initiation of the immunosuppressive cascade triggered by mucin, including production and secretion of prostaglandin E2 (PGE2), followed by VEGF induction and suppression of natural killer cell, lymphokine-activated killer cell and cytotoxic T cell activity.