

[Open Peer Review on Qeios](#)

Anti-GRP78 Monoclonal Antibody PAT-SM6

National Cancer Institute

Source

National Cancer Institute. *Anti-GRP78 Monoclonal Antibody PAT-SM6*. NCI Thesaurus. Code C103857.

A IgM monoclonal antibody (MoAb) against 78-kDa glucose-regulated protein (GRP78; also called BiP or HSPA5), with potential proapoptotic and antineoplastic activities. Upon intravenous administration of the anti-GRP78 monoclonal antibody PAT-SM6, the MoAb strongly binds to GRP78, thereby preventing the activation of multiple GRP78-mediated pathways and blocking the GRP78-induced suppression of apoptotic pathways. This eventually leads to the induction of tumor cell apoptosis and a reduction in tumor cell proliferation. GRP78, the endoplasmic reticulum (ER) chaperone and unfolded protein response (UPR) regulator, is overexpressed on the surface of a variety of cancer cell types; its expression is associated with increased tumor cell survival and proliferation, as well as angiogenesis and resistance to chemotherapy.