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Apoptosis Inducer GCS-100

National Cancer Institute

Source

National Cancer Institute. *Apoptosis Inducer GCS-100*. NCI Thesaurus. Code C70984.

A galectin-binding polysaccharide derived from citrus pectin with potential antineoplastic activity. Apoptosis inducer GCS-100 binds to the carbohydrate-binding domain of the lectin galectin-3, which may result in apoptosis mediated through mitochondria/caspase activation cascades; this agent may overcome tumor growth mediated through anti-apoptotic protein Bcl-2, heat-shock protein 27 (Hsp27), and nuclear factor-kappa B (NF-kB). Galectin-3, a chimeric molecule consisting of both carbohydrate recognition and collagen-like domains, interacts with a variety of carbohydrate and protein ligands to form pentamers with unique crosslinking abilities; this lectin also exhibits anti-apoptotic properties, perhaps, in part, through the regulation of intracellular signaling pathways.