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# Soluble Guanylate Cyclase Stimulator IW-1701

National Cancer Institute

## Source

National Cancer Institute. *Soluble Guanylate Cyclase Stimulator IW-1701*. NCI Thesaurus. Code C153148.

An orally bioavailable stimulator of soluble guanylate cyclase (sGC), with potential anti-inflammatory and vasodilating activities. Upon oral administration, sGC stimulator IW-1701 targets, allosterically binds to and enhances the nitric oxide (NO)-dependent catalytic activity of sGC. This enhances NO-sGC signaling and increases the formation of the intracellular second messenger cyclic guanosine monophosphate (cGMP), which is derived from guanosine triphosphate (GTP). This enhances NO/cGMP-mediated muscle relaxation, suppresses leukocyte-endothelial interactions and promotes vascular anti-inflammatory effects. The NO/sGC/cGMP signaling pathway plays an important role in vasodilation, blood flow and inflammatory processes. sGC, a heme-containing cytoplasmic signaling enzyme, catalyzes the formation of cGMP from GTP in response to NO binding to heme.