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Topsalysin

National Cancer Institute

Source

National Cancer Institute. *Topsalysin*. NCI Thesaurus. Code C64779.

A targeted prodrug consisting of a recombinant modified form of the *Aeromonas* protoxin, proaerolysin (PA), bearing a prostate-specific protease cleavage site, with potential antineoplastic activity. When injected directly into the prostate, topsalysin is hydrolyzed to the active toxin aerolysin by the serine protease prostate specific antigen (PSA), a protein overexpressed by prostate cancers and prostate cells in hyperplastic prostatic tissue. Aerolysin molecules then oligomerize to form ring-like heptamers that are incorporated into the lipid bilayers of cell membranes, forming large membrane channels and resulting in the leakage of cellular contents and lysis of PSA-expressing prostate cells.