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# Substance P-Saporin

National Cancer Institute

## Source

National Cancer Institute. *Substance P-Saporin*. NCI Thesaurus. Code C107682.

An agent composed of substance P (SP) conjugated to the ribosome-inactivating protein and neurotoxin saporin (SAP), isolated from the seeds of the plant *Saponaria officinalis* (SP-SAP), with potential analgesic activity. Upon administration, SP-SAP targets the SP receptor, neurokinin-1 receptor (NK-1R), located on neurons. When SP-SAP binds NK-1R and the receptor/conjugate complex internalizes, the saporin moiety inactivates ribosomes and prevents protein synthesis, which causes cell death, destroys NK-1R-expressing nerves and decreases pain perception.