

Table S1. SFN methylation, clinical outcomes and detection methods in different cancer types.

Cancer type	Methylation frequency	Related clinical outcomes	Detection method	(Refs.)
Breast cancer	>90%	i) Methylation leads to G2/M phase arrest defects and promotes tumor progression. ii) Serum methylation can be used as a screening marker for metastatic breast cancer and as a monitor for treatment response.	Methylation-specific PCR assay	(32,33,35,36)
Gastric cancer	43% (primary)	SFN plays an important role in the proliferation and metastasis of gastric cancer cells	Bisulfite-SSCP assay	(89,90)
Lung cancer (non-small cell lung cancer)	64.6-100%	i) Methylation leads to G2/M phase arrest defects and promotes tumor progression. ii) Serum methylation can be used as a diagnostic marker. iii) Methylation leads to cisplatin resistance, which is related to the TRIM25 pathway.	Methylation-specific PCR assay	(34,41,42)
Ovarian cancer	Hypermethylation (low expression)	SFN methylation as a marker was found to be associated with ovarian cancer but unable to predict patient outcomes.	Methylation-specific PCR assay	(55)
Pancreatic cancer	Hypomethylation (high expression)	i) High expression of SFN is related to gemcitabine resistance. ii) Methylation level is negatively correlated with survival rate.	Methylation-specific PCR assay	(76,79,80)
Nasopharyngeal carcinoma	63%	i) SFN expression is related to overall survival. ii) Regulates epithelial-mesenchymal transition through miR-597 and miR-675-5p. iii) Inhibits nasopharyngeal carcinoma cell invasion through the SFN/EGFR/keratin-8 signaling axis	Methylation-specific PCR assay	(58,59,60,61)
Squamous cell carcinoma (vulvar/esophageal/oral)	53% (vulvar squamous cell carcinoma)	SFN is downregulated through DNA methylation, thereby promoting the progression of vulvar squamous cell carcinoma.	Methylation-specific PCR assay	(63,64)
Kidney cancer	87.5%	Influences cell cycle regulation, enabling tumor cells to escape DNA damage caused by cisplatin and further promote tumor cell proliferation.	Methylation-specific PCR assay	(49,50)
Gallbladder cancer	90%	Low expression of SFN may promote progression.	Methylation-specific PCR assay	(75)

SFN; 14-3-3 σ ; SSCP, single-strand conformation polymorphism; TRIM25, tripartite motif containing 25; miR, micro RNA.