

**Figure S1** NSD2 expression is increased in various cancer types. WHSC1 (encoding NSD2 protein) expression levels in 13 GEO datasets. \*,  $P<0.05$ ; \*\*,  $P<0.01$ ; \*\*\*,  $P<0.001$ . GEO, Gene Expression Omnibus; NSD2, nuclear receptor-binding SET domain-containing protein.

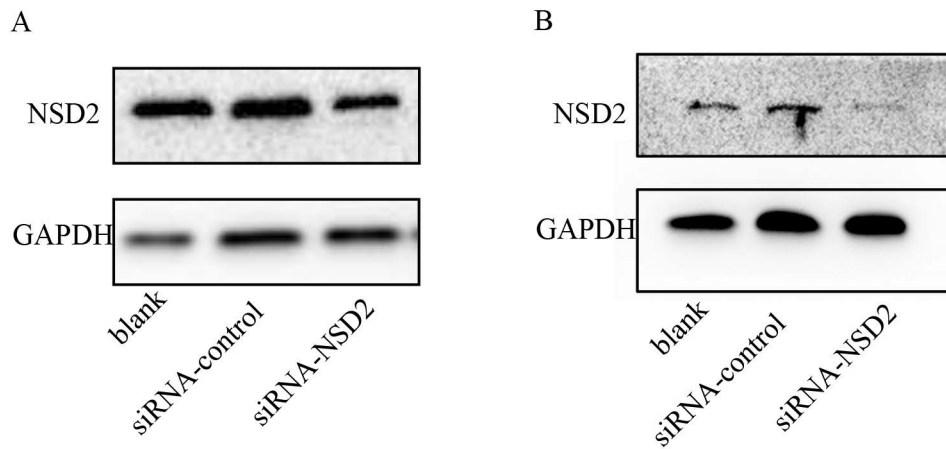
**Table S1** Primer sequences for real-time PCR

Gene (accession number)	Primer names	Sequences
<i>GAPDH</i> (NM_002046.7)	Forward	CTGGGCTACACTGAGCACC
	Reverse	AAGTGGTCGTTGAGGGCAATG
<i>NSD2</i> (NM_133330.3)	Forward	TTATTCCAGCCGACAAGCTGA
	Reverse	CGCAGTTTGGCATCGTGTG
<i>TWIST1</i> (NM_000474.4)	Forward	GTCCGCAGTCTTACGAGGAG
	Reverse	GCTTGAGGGTCTGAATCTTGCT
<i>MMP1</i> (NM_002421.4)	Forward	GCCAGATTTGCCAAGAGCAG
	Reverse	TGCTTGACCCTCAGAGACCT
<i>MMP2</i> (NM_004530.6)	Forward	TGGATGATGCCTTTGCTCGT
	Reverse	GGGAACTTGCAGTACTCCCC
<i>MMP7</i> (NM_002423.5)	Forward	TTGATGGGCCAGGAAACACG
	Reverse	CTACCATCCGTCCAGCGTTC
<i>MMP9</i> (NM_004994.3)	Forward	CCAATCTCACCGACAGGCAG
	Reverse	CAGGCCCCAGAGATTTGAC
<i>MMP10</i> (NM_002425.3)	Forward	CTGAGATGCCAGCCAAGTGT
	Reverse	GTTCAGGGTCCAGTGGGAT
<i>MMP14</i> (NM_004995.4)	Forward	GGCTACAGCAATATGGCTACC
	Reverse	GATGGCCGCTGAGAGTGAC

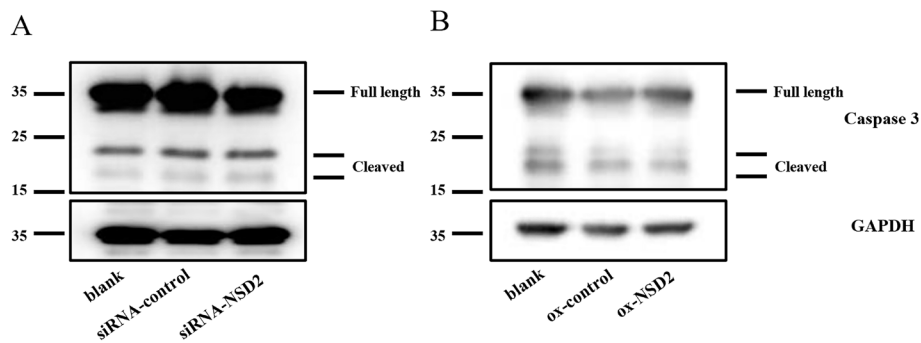
PCR, polymerase chain reaction.

**Table S2** Abbreviations of cancer types in *Figure 1A*

Abbreviations	Full names
ACC	Adrenocortical carcinoma
BLCA	Bladder Urothelial Carcinoma
BRCA	Breast invasive carcinoma
CESC	Cervical squamous cell carcinoma and endocervical adenocarcinoma
CHOL	Cholangiocarcinoma
COAD	Colon adenocarcinoma
DLBC	Lymphoid Neoplasm Diffuse Large B-cell Lymphoma
ESCA	Esophageal carcinoma
GBM	Glioblastoma multiforme
HNSC	Head and Neck squamous cell carcinoma
KICH	Kidney Chromophobe
KIRC	Kidney renal clear cell carcinoma
KIRP	Kidney renal papillary cell carcinoma
LAML	Acute Myeloid Leukemia
LGG	Brain Lower Grade Glioma
LIHC	Liver hepatocellular carcinoma
LUAD	Lung adenocarcinoma
LUSC	Lung squamous cell carcinoma
MESO	Mesothelioma
OV	Ovarian serous cystadenocarcinoma
PAAD	Pancreatic adenocarcinoma
PCPG	Pheochromocytoma and Paraganglioma
PRAD	Prostate adenocarcinoma
READ	Rectum adenocarcinoma
SARC	Sarcoma
SKCM	Skin Cutaneous Melanoma
STAD	Stomach adenocarcinoma
TGCT	Testicular Germ Cell Tumors
THCA	Thyroid carcinoma
THYM	Thymoma
UCEC	Uterine Corpus Endometrial Carcinoma
UCS	Uterine Carcinosarcoma
UVM	Uveal Melanoma



**Figure S2** SiRNA effectively reduces the expression levels of NSD2. Western blot analysis showing the expression levels of NSD2 before and after siRNA-mediated NSD2 knockdown in (A) BEL-7402 and (B) HepG2 cells. GAPDH, glyceraldehyde-3-phosphate dehydrogenase; NSD2, nuclear receptor-binding SET domain-containing protein; siRNA, small interfering RNA.



**Figure S3** Expression of full length and cleaved caspase 3 manipulated by NSD2. (A,B) Western blot showing the levels of full length and cleaved caspase 3 in NSD2 knockdown (A) and overexpression cells (B). GAPDH, glyceraldehyde-3-phosphate dehydrogenase; NSD2, nuclear receptor-binding SET domain-containing protein; siRNA, small interfering RNA.