

**Supplementary Table S1.** Studies excluded after full text analysis and motives. Underlined studies were mentioned in the main text when appropriate, and their findings were integrated into the pathway analysis.

PMID	Exclusion criteria
18650421	diabetes and inflammation, not cancer
<u>20121546</u>	<u>gallbladder cancer, SETD7 was downregulated by silencing T-Cadherin. No functional nor association studies regarding SETD7 or SETD7-induced methylation</u>
<u>21115810</u>	<u>SETD7 methylates MYPT1, no functional nor association studies regarding SETD7 or SETD7-induced methylation in cancer cells or tissues, methods poorly described</u>
<u>27913949</u>	<u>prostate, no functional nor association studies regarding SETD7 or SETD7-induced methylation</u>
26861389	it doesn't focus neither on SETD7 nor cancer. SETD7 was found to be related with serum lycopene concentrations in a healthy group of amish people
<u>25189356</u>	<u>SETD7 was found mutated in prostate cancer. No functional nor further studies were conducted</u>
30442713	SETD7 methylates SOX2, however, no functional nor association studies regarding SETD7 or SETD7-induced methylation were performed. Mouse Embryonic Fibroblasts, HEK293, ovarian cancer cells PA-1
29358331	SETD7 methylates SOX2. No functional nor association studies regarding SETD7 or SETD7-induced methylation, however they assess cells growth by looking at the cells under microscope. Mouse Embryonic Fibroblasts, HEK293, ovarian cancer cells PA-1
<u>28534506</u>	<u>SETD7 methylates Hlf1a, no functional nor association studies regarding SETD7 or SETD7-induced methylation were performed in cancer cells or tissues</u>
25681344	SETD7 in Hepatitis C virus (HCV) infection, Huh7.5.1, Huh7, and L02 (normal human hepatic cell line), no functional studies
<u>24492612</u>	<u>SETD7 methylates Dnmt1, no functional nor association studies regarding SETD7 or SETD7-induced methylation were performed</u>
22820736	SETD7 methylates FOXO3. No functional nor association studies regarding SETD7 or SETD7-induced methylation
22007908	no functional nor association studies regarding SETD7 or SETD7-induced methylation
21440447	SETD7 inhibitors, no functional nor association studies regarding SETD7 or SETD7-induced methylation
19864627	SETD7 methylates p65 and is required for the expression of a subset of NF-kappaB target genes in response to TNFalpha stimulation. No functional nor association studies regarding SETD7 or SETD7-induced methylation, HeLa cells
<u>18471979</u>	<u>SETD7 methylates ERa, no functional nor association studies regarding SETD7 or SETD7-induced methylation were performed</u>
<u>17108971</u>	<u>SETD7-mediated methylation of p53 K372 inhibits Smyd2-mediated methylation of p53 K370. No functional nor association studies regarding SETD7 or SETD7-induced methylation</u>

<u>15525938</u>	<u>SETD7 methylates p53 positively affecting its stability and restricting it to the nucleus. No functional nor association studies regarding SETD7 or SETD7-induced methylation</u>
32126499	SETD7 inhibitors, no studies performed in cells
29869845	SETD7 inhibitors, no studies performed in cells
28389916	technique development, SETD7 inhibitors, no cells used
24650704	SETD7 inhibitors, no <i>in vitro</i> nor <i>in vivo</i> studies, no functional assays nor association analysis
32173197	focus on SETD7 inhibitors, cell proliferation assay used to test inhibitor's biological function in MCF7 breast cancer cells, but no controls were used
29498708	SETD7 inhibitors, cell proliferation assay using MCF7 (breast cancer), HL60 (human leukemia cell line), MV4-11 (human biphenotypic B myelomonocytic leukemia), Kasumi-1 (leukemic cell line), U937 (human myeloid leukaemia cell line), THP1 (human monocytic cell line derived from an acute monocytic leukemia patient) and Jurkat (human T lymphocyte cells that are used to study acute T cell leukemia) cell lines, no controls!!
<u>21855805</u>	<u>p53 is methylated by SETD7, not cancer cells, <i>in vivo</i> experiments and <i>in vitro</i> using mouse embryonic fibroblasts</u>
<u>18280244</u>	<u>p53 is methylated by SETD7, not cancer cells, <i>in vivo</i> experiments and <i>in vitro</i> using mouse embryonic fibroblasts</u>
31035088	airway smooth muscle, functional studies (proliferation and invasion) but not cancer, primary cell culture from mice, mouse embryonic fibroblasts
30674889	problematic cell line used! focus molecule of the study isn't SETD7. SETD7 acts as a co-factor of ISL1 and links to ZEB1 <i>in vitro</i> (ChIP)
<u>30396921</u>	<u>no functional nor association studies regarding SETD7 or SETD7-induced methylation, however SETD7 is the focus; SETD7 knockdown affects a large number of genes expression in LNCaP cell line</u>
28557056	not cancer, SETD7 is the focus, <i>in vivo</i> experiments in mice, NCTC 2472 cells, Cyproheptadine (10-80 nmol, 1-6h) used as SETD7 antagonist
33305533	not cancer (myoblasts)