## **Supplementary information, Table S2**

Table S2 Plasmids used in this study.

Plasmid name	Construction method	Usage
pDEST32-UBE3A	LR reaction	Yeast 2-hybrid
pDEST22-ALDH1A2	LR reaction	Yeast 2-hybrid
pCDH-Flag-UBE3A (Full length)	Traditional cloning	Co-IP, IF
pCDH-Flag-UBE3A (isoform 1)	Traditional cloning	IF
pCDH-Flag-UBE3A (isoform 3)	Traditional cloning	IF
pcDNA3.1-5'-Myc-UBE3A	Traditional cloning	In vivo ubiquitylation
pcDNA3.1-5'-Myc-UBE3A (isoform 1)	Traditional cloning	In vivo ubiquitylation
pcDNA3.1-5'-Myc-UBE3A (isoform 3)	Traditional cloning	In vivo ubiquitylation
pcDNA3.1-5'-Myc-UBE3A-T508A	Site-directed mutagenesis	In vivo ubiquitylation
pcDNA3.1-5'-Myc-UBE3A-T508E	Site-directed mutagenesis	In vivo ubiquitylation
pcDNA3.0-ALDH1A2-HA	Traditional cloning	Co-IP, in vivo ubiquitylation
pcDNA3.0-ALDH1A1-HA	Traditional cloning	Co-IP, in vivo ubiquitylation
pcDNA3.0-ALDH1A3-HA	Traditional cloning	Co-IP, in vivo ubiquitylation
pcDNA3.0-ALDH1A2-K269/370/415R-HA	Site-directed mutagenesis	In vivo ubiquitylation
pcDNA3.0-ALDH1A2-Flag	Traditional cloning	IP
pcDNA3.0-ALDH1A2-RFP	Traditional cloning	IF
pET28a-ALDH1A2-His6	Traditional cloning	GST pulldown
pET28a-ALDH1A1-His6	Traditional cloning	GST pulldown
pET28a-ALDH1A3-His6	Traditional cloning	GST pulldown
pET22b-ALDH1A2-His6	Traditional cloning	in vitro ubiquitylation
pET22b-ALDH1A1-His6	Traditional cloning	in vitro ubiquitylation
pET22b-ALDH1A3-His6	Traditional cloning	in vitro ubiquitylation
pGEX4T-1-GST-E6AP	Traditional cloning	GST pulldown
pGEX4T-1-GST-E6AP-1-280	Traditional cloning	GST pulldown
pGEX4T-1-GST-E6AP-281-505	Traditional cloning	GST pulldown
pGEX4T-1-GST-E6AP-506-875	Traditional cloning	GST pulldown
pGEX4T-1-GST-E6AP-281-875	Traditional cloning	GST pulldown
pACYC-HA-UB-UBCH7-Uba1-UBE3A	Traditional cloning	In vitro ubiquitylation
pACYC-HA-UB-UBCH7-Uba1	Traditional cloning	In vitro ubiquitylation
pRK5-His6-UB (modified from Addgene # 17608)	Traditional cloning	In vivo ubiquitylation
pRK5-His6-UB-K6	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K11	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K27	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K29	Site-directed mutagenesis	In vivo ubiquitylation

pRK5-His6-UB-K33	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K48	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K63	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K29R	Site-directed mutagenesis	In vivo ubiquitylation
pRK5-His6-UB-K63R	Site-directed mutagenesis	In vivo ubiquitylation
pLenti-sgUBE3A-Cas9 (vector: Addgene # 52961)	Traditional cloning	CRISPR-Cas9
pGL4.22-RARE-TK-luciferase	Gibson assembly	Luciferase activity assay
pCDH-RARE-TK-hrGFP	Gibson assembly	IF
pCDH-turboRFP	Traditional cloning	IF
pCDH-Flag-UBE3A-IRES-turboRFP	Gibson assembly	IF
pCDH-Flag-UBE3A-T508E-IRES-turboRFP	Gibson assembly	IF
pAAV-hSyn-3XFlag-UBE3A	Traditional cloning	AAV
pAAV-hSyn-3XFlag-UBE3A-T508E	Traditional cloning	AAV
pAAV-hSyn-3XFlag-EGFP	Traditional cloning	AAV