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DTX2 Rabbit pAb

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Catalog # AP54847

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q86UW9
Predicted	Rat, Human, Mouse, Zebrafish, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	67246
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DTX2
Epitope Specificity	331-430/622
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic and Nuclear.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	DTX2 belongs to the Deltex family. It contains one RING-type zinc finger and two WWE domains. DTX2 is a regulator of Notch signaling, a signaling pathway involved in cell-cell communications that regulates a broad spectrum of cell-fate determinations. It probably acts both as a positive and negative regulator of Notch, depending on the developmental and cell context; mediates the antineural activity of Notch, possibly by inhibiting the transcriptional activation mediated by MATCH1. DTX2 also functions as an ubiquitin ligase protein in vitro, suggesting that it may regulate the Notch pathway via some ubiquitin ligase activity. The WWE domains are thought to mediate some protein-protein interaction, and are frequently found in ubiquitin ligases. There are two named isoforms.

Additional Information

Gene ID	113878
Other Names	Probable E3 ubiquitin-protein ligase DTX2, 2.3.2.27, DTX2, KIAA1528, RNF58
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	DTX2
Synonyms	KIAA1528, RNF58
Function	E3 ubiquitin ligase that conjugates ubiquitin to ADP- ribosylated cysteine residues, independently of lysine side chains or free N-termini (PubMed:40681873). For example, PARP7 generates an ADP- ribosyl degron within the DNA-binding domain of the androgen receptor (AR), which is recognized by DTX2 and targeted for proteasomal degradation (PubMed:40681873). Functions in genome stability maintenance by acting as an ADP-ribosylation-dependent regulator of DNA double-strand break repair (PubMed:38992439). Mechanistically, recognizes PARylated substrates generated in response to DNA damage and promotes their ubiquitination via its RING and DTC domains (PubMed:38992439). Also regulates additional cellular pathways through ubiquitination of specific substrates. Acts as an E3 ubiquitin ligase for RNA demethylase FTO, promoting its ubiquitination and proteasomal degradation (PubMed:39661064). In turn, regulates antitumor immune responses (PubMed:39661064). Promotes 'Lys-27'-linked ubiquitination of TFRC, thereby modulating iron metabolism and inhibiting ferroptosis (PubMed:41772062). In addition, promotes transcription of telomerase reverse transcriptase by mediating 'Lys-63'-linked ubiquitination of nuclear factor 1 C-type (NFIC) that stabilizes its binding on hTERT promoter (PubMed:35198878).
Cellular Location	Chromosome. Cytoplasm. Nucleus Note=Predominantly cytoplasmic. Partially nuclear. Is recruited to DSBs in a PARylation-dependent manner (PubMed:38992439)

Background

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