DTX3L Protein, Human

Cat. No.:	HY-P702072
Synonyms:	DTX3L; E3 ubiquitin-protein ligase DTX3L; B-lymphoma- and BAL-associated protein; Protein deltex-3-like; RING-type E3 ubiquitin transferase DTX3L; Rhysin-2; Rhysin2
Species:	Human
Source:	E. coli
Accession:	Q8TDB6 (A2-E740)
Gene ID:	/
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	DTX3L Protein, an E3 ubiquitin-protein ligase, collaborates with ADP-ribosyltransferase PARP9 to fulfill key roles in DNA damage repair and interferon-mediated antiviral responses. It monoubiquitinates various histones, including H2A, H2B, H3, and H4, particularly at 'Lys-91' of histone H4 in response to DNA damage. The exact function of H4K91ub1 remains unclear but may serve as a licensing signal for additional histone H4 post-translational modifications. The PARP1-dependent PARP9-DTX3L-mediated ubiquitination facilitates the specific recruitment of 53BP1/TP53BP1, UIMC1/RAP80, and BRCA1 to DNA damage sites. Additionally, DTX3L positively regulates STAT1-dependent interferon-stimulated gene transcription by monoubiquitinating histone H2B, promoting chromatin remodeling. Independently of its catalytic activity, DTX3L plays a crucial role in the sorting of CXCR4 from early endosomes to lysosomes, reducing E3 ligase ITCH activity and facilitating the ubiquitination of endosomal sorting complex required for transport (ESCRT-0) components HGS and STAM. Furthermore, in association with PARP9, DTX3L contributes to antiviral responses by mediating 'Lys-48'-linked ubiquitination of encephalomyocarditis virus (EMCV) and human rhinovirus (HRV) C3 proteases, leading to their proteasomal-mediated degradation. These diverse functions underscore the significance of DTX3L in regulating critical cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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