

RUVBL1 Protein, Human (sf9, His)

Cat. No.:	HY-P76016
Synonyms:	RuvB-like 1; ECP-54; NMP 238; Pontin 52; TIP49a; TAP54-alpha; RUVBL1; INO80H
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9Y265 (M1-K456)
Gene ID:	8607
Molecular Weight:	Approximately 57 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

RUVBL1 protein possesses single-stranded DNA-stimulated ATPase and ATP-dependent DNA helicase (3' to 5') activity, with hexamerization considered crucial for ATP hydrolysis, and adjacent subunits in the ring-like structure contributing to the ATPase activity. As a component of the NuA4 histone acetyltransferase complex, RUVBL1 is involved in the transcriptional activation of select genes, primarily through the acetylation of nucleosomal histones H4 and H2A. This modification can alter nucleosome-DNA interactions and promote interaction with other proteins that positively regulate transcription. The NuA4 complex, including the ATPase and helicase activities, is, in part, contributed by the association of RUVBL1 and RUVBL2 with EP400. The NuA4 complex may also play a direct role in DNA repair when recruited to sites of DNA damage. Furthermore, RUVBL1 is a component of a SWR1-like complex responsible for the removal of histone H2A.Z/H2AZ1 from the nucleosome and is proposed as a core component of the chromatin remodeling INO80 complex, which exhibits DNA- and nucleosome-activated ATPase activity and catalyzes ATP-dependent nucleosome sliding. RUVBL1 is essential for cell proliferation, plays a role in oncogenic transformation by MYC, and modulates transcriptional activation by the LEF1/TCF1-CTNNB1 complex. Additionally, RUVBL1 may bind plasminogen at the cell surface, enhancing plasminogen activation.

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

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