

MORC3 Protein, Human (His-SUMO)

Cat. No.:	HY-P71545
Synonyms:	KIAA0136; Microrchidia 3; MORC family CW type zinc finger 3; MORC family CW type zinc finger protein 3; MORC family CW-type zinc finger protein 3; MORC3; MORC3_HUMAN; Nuclear matrix protein 2; Nuclear matrix protein NXP2; NXP2; ZCW5; ZCWCC3
Species:	Human
Source:	E. coli
Accession:	Q14149 (1M-290Y)
Gene ID:	23515
Molecular Weight:	Approximately 48.7 kDa

PROPERTIES

AA Sequence	<pre> M A A Q P P R G I R L S A L C P K F L H T N S T S H T W P F S A V A E L I D N A Y D P D V N A K Q I W I D K T V I N D H I C L T F T D N G N G M T S D K L H K M L S F G F S D K V T M N G H V P V G L Y G N G F K S G S M R L G K D A I V F T K N G E S M S V G L L S Q T Y L E V I K A E H V V V P I V A F N K H R Q M I N L A E S K A S L A A I L E H S L F S T E Q K L L A E L D A I I G K K G T R I I I W N L R S Y K N A T E F D F E K D K Y D I R I P E D L D E I T G K K G Y K K Q E R M D Q I A P E S D Y S L R A Y C S I L Y L K P R M Q I I L R G Q K V K T Q L V S K S L A Y I E R D V Y </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
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	MORC3 Protein, a nuclear matrix protein, orchestrates the formation of MORC3-NBs (nuclear bodies) through an ATP-dependent mechanism, playing a crucial role in innate immunity by restricting various viruses through modulation of the IFN response. Its primary antiviral function involves the regulation of an IFN-responsive element that activates IFNB1, safeguarded by a secondary IFN-repressing function. Sumoylated MORC3-NBs interact with PML-NBs, recruiting TP53 and SP100, thereby regulating TP53 activity. Additionally, MORC3 demonstrates in vitro RNA binding capability. Serving as a
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histone methylation reader, MORC3 binds to non-methylated (H3K4me0), monomethylated (H3K4me1), dimethylated (H3K4me2), and trimethylated (H3K4me3) 'Lys-4' on histone H3, with a preference order of H3K4me3 > H3K4me2 > H3K4me1 > H3K4me0. In the context of microbial infection, MORC3 may be essential for influenza A transcription during viral infection.

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

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