

Recombinant Mouse Nupr1 Protein, Myc/DDK-tagged

Cat. No. Nupr1-4559M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length nuclear protein transcription regulator 1 (Nupr1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Transcription regulator that converts stress signals into a program of gene expression that empowers cells with resistance to the stress induced by a change in their microenvironment. Thereby participates in regulation of many process namely cell-cycle, apoptosis, autophagy and DNA repair responses. Controls cell cycle progression and protects cells from genotoxic stress induced by doxorubicin through the complex formation with TP53 and EP300 that binds CDKN1A promoter leading to transcriptional induction of CDKN1A. Protects pancreatic cancer cells from stress-induced cell death by binding the RELB promoter and activating its transcription, leading to IER3 transactivation. Negatively regulates apoptosis through interaction with PTMA. Inhibits autophagy-induced apoptosis in cardiac cells through FOXO3 interaction, inducing cytoplasmic translocation of FOXO3 thereby preventing the FOXO3 association with the pro-autophagic BNIP3 promoter. Inhibits cell growth and facilitates programmed cell death by apoptosis after adriamycin-induced DNA damage through transactivation of TP53. Regulates methamphetamine-induced apoptosis and autophagy through DDIT3-mediated endoplasmic reticulum stress pathway. Participates in DNA repair following gamma-irradiation by facilitating DNA access of the transcription machinery through interaction with MSL1 leading to

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inhibition of histone H4' Lys-16' acetylation (H4K16ac). Coactivator of PAX2 transcription factor activity, both by recruiting the EP300 cofactor to increase PAX2 transcription factor activity and by binding PAXIP1 to suppress PAXIP1-induced inhibition on PAX2. Positively regulates cell cycle progression through interaction with COPS5 inducing cytoplasmic translocation of CDKN1B leading to the CDKN1B degradation. Coordinates, through its interaction with EP300, the association of MYOD1, EP300 and DDX5 to the MYOG promoter, leading to inhibition of cell-cycle progression and myogenic differentiation promotion. Negatively regulates beta cell proliferation via inhibition of cell-cycle regulatory genes expression through the suppression of their promoter activities. Also required for LHB expression and ovarian maturation. Exacerbates CNS inflammation and demyelination upon cuprizone treatment.

Molecular Mass	8.9 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Nupr1 nuclear protein transcription regulator 1 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Nupr1

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Synonyms	NUPR1; nuclear protein 1; protein p8; p8; Com1; 2310032H04Rik
Gene ID	56312
mRNA Refseq	NM_019738
Protein Refseq	NP_062712
UniProt ID	Q9WTK0

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