

#4789 Store at -20°C

Nucleomethylin Antibody



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TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	58	Rabbit	#O43159	23378

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	This antibody detects endogenous levels of total Nucleomethylin protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino terminus of the human Nucleomethylin protein. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Nucleomethylin (NML), also known as ribosomal RNA-processing protein 8 (RRP8) and human cerebral protein 1 (Hucep-1), is a nucleolar protein (1,2). NML interacts with the histone de-acetylase protein SirT1 and histone methyl-transferase protein SUV39H1 to form the energy-dependent nucleolar silencing complex (eNoSC) that regulates ribosomal RNA (rRNA) transcription in response to changes in the energy state of the cell (2). As energy levels in the cell decrease due to caloric restriction, eNoSC binds to rRNA genes and represses transcription by SirT1-mediated de-acetylation of histones and SUV39H1-mediated methylation of histone H3 on Lys9. NML binds to di-methylated Lys9 of histone H3 and likely functions in the recruitment and spreading of eNoSC along the rRNA genes (2). NML also contains a methyltransferases-like domain, which binds to S-adenosyl-methionine (SAM) and is required for eNoSC function (2). By limiting the transcription of rRNA genes during caloric restriction, eNoSC promotes the restoration of energy balance and protects cells from energy-dependent apoptosis.	
Background References	1. Andersen, J.S. et al. (2005) <i>Nature</i> 433, 77-83. 2. Murayama, A. et al. (2008) <i>Cell</i> 133, 627-39.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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