

Fibrillarin (GST)

CATALOG NO.: HMT-11-184

LOT NO.:

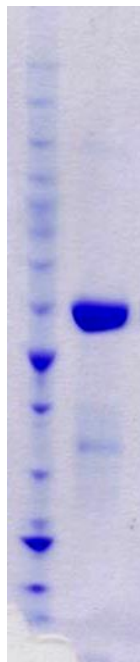
DESCRIPTION: Human recombinant fibrillarin (residues 2-321; Genbank Accession # NM_001436; MW= 61.3 kDa) expressed as an N-terminal GST-fusion protein in *E. coli*. Fibrillarin is a component of nucleolar ribonucleoprotein complexes including snoRNPs (small nucleolar ribonucleoproteins) and Cajal bodies. As part of the C/D snoRNPs, fibrillarin functions as the catalytic subunit in the 2'-O-methylation of ribosomal RNAs¹ (see also review²). In addition, fibrillarin has recently been shown to catalyze methylation of histone H2A glutamine-104, a modification restricted to the nucleolus and linked to RNA Pol I transcriptional activity on rDNA³. A distinct protein subcomplex comprising fibrillarin, SF2A-p32 and the arginine methyltransferases PRMT1 and PRMT5 has been described⁴ and fibrillarin's N-terminal glycine and arginine-rich (GAR) domain, including in the context of full-length fibrillarin⁵, is a substrate for various PRMTs (see PRMT5 data in figure below).

PURITY: >80% by SDS-PAGE

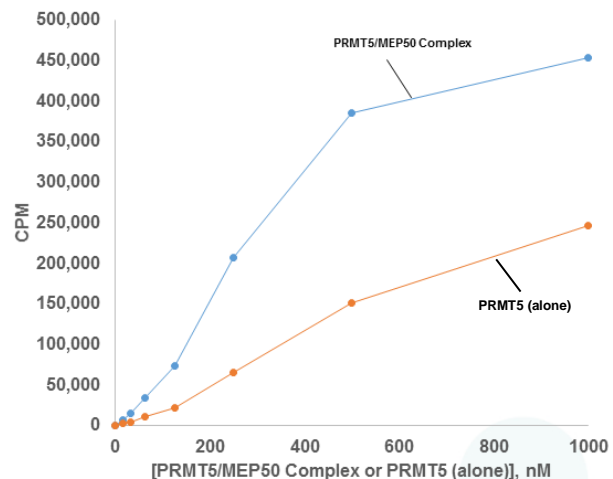
SUPPLIED AS: $\mu\text{g}/\mu\text{L}$ in 50 mM Tris HCl, pH 7.5, 500 mM NaCl, 1 mM TCEP, 10 % glycerol as determined by OD₂₈₀

STORAGE: -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted protein should be snap frozen, for example in a dry/ice ethanol bath or liquid nitrogen. Minimize freeze/thaws if possible, but very low volume aliquots (<5 μl) or storage of diluted enzyme is not recommended.

REFERENCES: 1) A.D. Omer *et al. Proc. Natl. Acad. Sci. USA* 2002 **99** 5289; 2) S.L. Reichow *et al. Nucleic Acids Res.* 2007 **35** 1452; 3) P. Tessarz *et al. Nature* 2014 **505** 564; 4) M. Yanagida *et al. J. Biol. Chem.* 2004 **279** 1607; 5) C.H. Lin *et al. J. Protein Chem.* 2002 **21** 447



Coomassie blue-stained SDS-PAGE (4-12% acrylamide) of 5 μg of Fibrillarin (GST). MW markers (left) are, from top, 220, 160, 120, 100, 90, 80, 70, 60, 50, 40, 30, 25, 20, 15, & 10 kDa.



Methyltransferase Activity of PRMT5/MEP50 Complex and PRMT5 (alone) with Fibrillarin (GST). Methylation determined as TCA-precipitable counts in a scintillation/filter plate assay. Reactions were 25 μL , 60 min., 30°C, with 1 μM [³H]-SAM and 0.05 mg/mL Fibrillarin (GST).

This product is not intended for therapeutic or diagnostic use in animals or in humans.

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