

## Nuclear Extract (HeLa)

**CATALOG NO.:** HMT-30-136

**LOT NO.:**

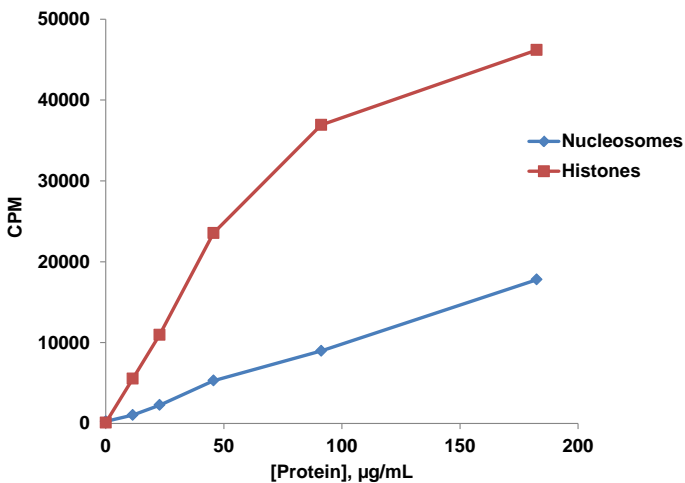
**DESCRIPTION:** A high salt extract<sup>1,2</sup> of nuclei from HeLa-S3 cells (human cervical cancer line). Such extracts, in addition to containing transcription initiation factors<sup>1</sup>, comprise various enzymes and multi-enzyme complexes with epigenetic modification activities, such as histone deacetylases (HDACs) and histone methyltransferases (HMTs). (See for example<sup>3-5</sup> and figures below.)

**APPLICATIONS:** RBC's HeLa Nuclear extract displays histone methyltransferase (HMT) activity in radiolabeled assays with <sup>3</sup>H-S-adenosylmethionine and core histones or nucleosomes as substrates and deacetylase (HDAC) activity with a fluorogenic acetylated lysine substrate. (See figures below).

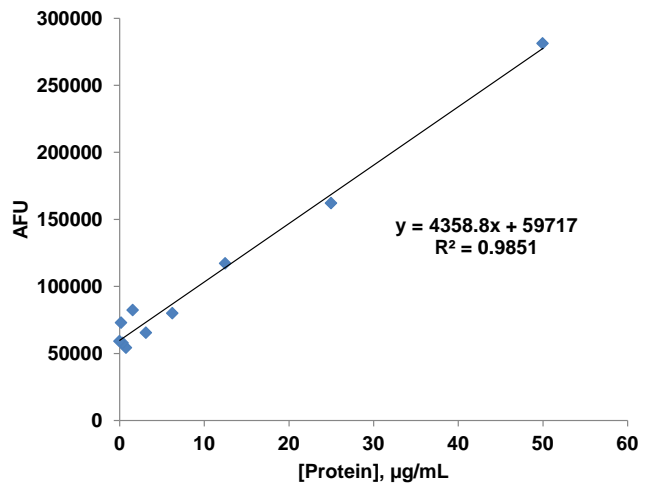
**SUPPLIED AS:** \_\_\_ mg/ml protein in 20 mM HEPES/NaOH pH 7.9, 100 mM KCl, 0.2 mM EDTA, 0.5 mM PMSF, 0.5 mM DTT, 20% glycerol (v/v).

**STORAGE:** -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted portion 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 solutions is not recommended.

**REFERENCES:** 1) J.D. Dignam *et al. Nucl. Acids Res.* 1983 **11** 1475; 2) S.M. Abmayr *et al. Genes Devel.* 1988 **2** 542; 3) S. Yamagoe *et al. Mol. Cell. Biol.* 2003 **23** 1025; 4) J. Wysocka *et al. Genes Devel.* 2003 **17** 896; 5) J. Fang *et al. Methods Enzymol.* 2004 **377** 213



**Methyltransferase Activity of HeLa Nuclear Extract**  
 Reactions (25 µL) were 60 min., 30°C with 1 µM [<sup>3</sup>H]-SAM and 0.05 mg/mL chicken core histones or HeLa oligonucleosomes in 50 mM Tris-HCl, pH 8.5, 50 mM NaCl, 5 mM MgCl<sub>2</sub>, 1 mM DTT, 1 mM PMSF. Activity determined as TCA-precipitable CPMs in a filter plate/scintillation assay.



**Deacetylase Activity of HeLa Nuclear Extract**  
 Reactions (6 µL) were 120 min., 30°C with 50 µM of a fluorogenic acetyllysine substrate (Ac-Lys(Ac)-AMC) in 50 mM Tris-HCl, pH 8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl<sub>2</sub>, 1 mg/mL BSA, 1% DMSO.

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