

# Histone Purification Kit

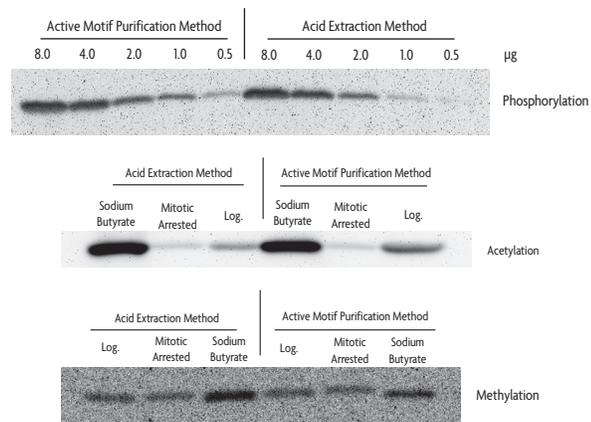
purify core histones while preserving modification states

Active Motif's Histone Purification Kit enables you to purify core histone proteins from cell or tissue samples while preserving post-translational modifications such as acetylation, methylation, and phosphorylation states (Figure 1). This method utilizes purification resin and a proprietary buffer system to purify the core histones. Unlike standard acid extraction methods, this kit enables you to further separate the total core histones into two populations: one fraction enriched for H2A and H2B dimers and a highly pure fraction containing H3 and H4 tetramers (Figure 2).

## Separate H2A/H2B from H3/H4

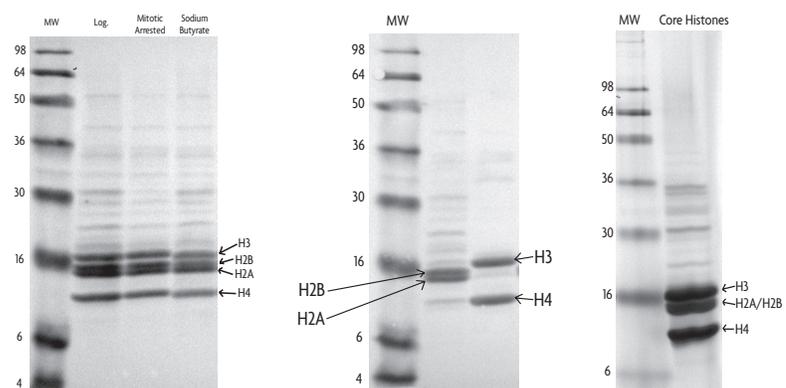
Histone Purification Kits provide you with a reusable purification column, Neutralization, Equilibration & Wash Buffers plus separate H2A/H2B and H3/H4 Elution Buffers so you can easily purify core histones from tissue or cell samples. The binding capacity of the purification resin is robust, so histones can be purified from as little as one 100 mm plate or liters of culture or grams of tissue. The yield is ~0.5 mg of total core histones per 3 x 150 mm plates, or 2.5 mg from 1 gram of tissue. Purified histones are ready for downstream analysis with Active Motif's many different histone antibodies, as well as with our Chromatin Assembly Kit (Catalog No. 53500); this unique kit improves functional assays by enabling you to generate chromatin *in vitro* that very closely resembles native chromatin.

- Purifies total core histones (H2A, H2B, H3 & H4) or separate fractions of H2A/H2B dimers and H3/H4 tetramers
- Preserves modifications on histones
- Novel purification resin and elution system yields highly pure histones



**Figure 1: Histone Purification Kit preserves post-translational modification states.**

Western blot analysis of histone modifications comparing samples isolated by standard acid extraction vs. with the Histone Purification Kit. **Top:** Histone H3 phospho Ser28 Rat mAb (Clone HTA28) (Cat. No. 39098). **Center:** Histone H4 tetra-acetyl Rabbit pAb (Cat. No. 39177). **Bottom:** Histone H3 trimethyl Lys4 Rabbit pAb (Cat. No. 39159).



**Figure 2: Core histones purified from HeLa cells and brain tissue.**

10  $\mu$ g of sample were loaded per lane. **Left:** Core histones purified from logarithmically growing, mitotic arrested or sodium butyrate-treated HeLa cells. **Center:** Core histones isolated from rat brain tissue. **Right:** Separate H2A/H2B and H3/H4 fractions purified from HeLa cells.

### CONTENTS & STORAGE

5X Neutralization Buffer, Extraction Buffer, Equilibration Buffer, Histone Wash Buffer, H2A/H2B Elution Buffer, H3/H4 Elution Buffer, Purification Resin and Purification Column. Reagents are to be stored at 4°C. All reagents are guaranteed stable for 6 months from date of receipt when stored properly.

Product	Format	Catalog No.
Histone Purification Kit	10 rxns	40025