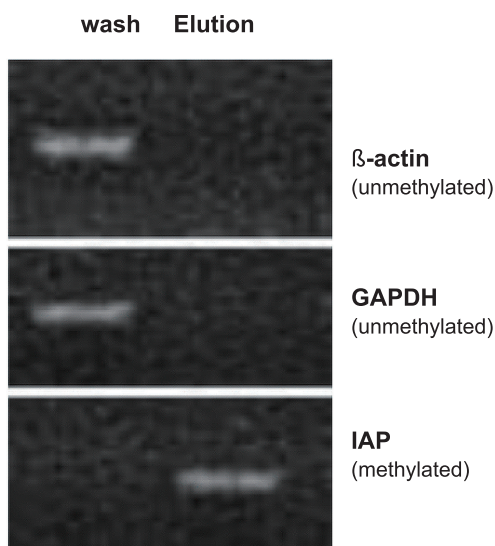


# MethylAffinity™ Methylated DNA Enrichment Kit

## Overview

MethylAffinity™ Methylated DNA Enrichment Kit provides a GCM™-bead-based method for quick enrichment of methylated DNA fragments from whole genome. The enriched sample improves the performance of downstream analysis, such as RT-PCR, microarray and sequencing, for methylation status and location studies.

The genetically engineered GCM™ recombinant protein is designed based on the functional domain of methyl binding domain (MBD) proteins. It binds specifically to double-stranded DNA containing methylated CpG islands and has much higher affinity and specificity than any wild-type MBDs.



**Figure 1.** PCR results of enrichment controls  
100 ng of mouse genomic DNA (sonicated) were added to 4 µl of GCM™-beads. After 1 hour binding reaction at RT, the beads were washed several times. Then the methylated DNA were eluted from the beads. The wash and elution supernatants (5% of each) were analyzed by PCR using primer sets specific for mouse β-actin promoter (unmethylated), GAPDH promoter (unmethylated), and IAP repeats (methylated). The PCR products were checked by agarose gel electrophoresis.

## Advantages

### Sensitive and high affinity

- Enrich methylated DNA from nanograms of genomic DNA sample
- Isolate DNA fragments containing only a few copies of methylated CpG dinucleotides

### Convenient gradient elution

- Salt gradient elution can be performed to fractionate DNA fragments based on methylated-CpG density

### Fewer steps and less time

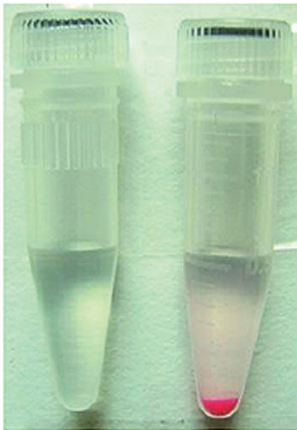
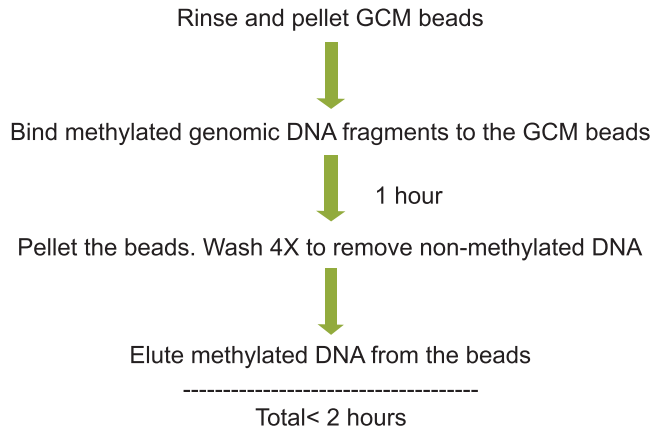
- Whole process takes < 2 hours
- Immobilized GCM beads are provided. No need to perform beads-protein coupling reaction
- Double-stranded methylated DNA fragments are captured, which simplifies sample preparation
- Rapid elution with salt

### Easy to handle

- Vivid magenta color makes the beads easy to spot, thus greatly reduces the risk of incidental beads loss

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## Protocol Overview



**Figure 2.** Easy to spot GCM™ beads Comparison of GCM™ magenta beads (right) with conventional Sepharose beads (left). The magenta color of the beads helps reduce accidental beads loss during the handling.

## To order

**MethylAffinity™ Methylated DNA Enrichment Kit**  
Cat. No. MAK-GCM-30 (30 Reactions)

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