

Reagents and Kits for Analysis of Protein-DNA Interactions

ACTIVE  MOTIF[®]

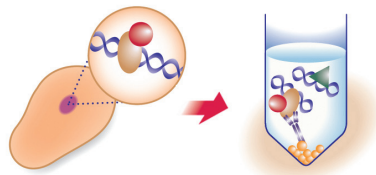
Enabling Epigenetics Research

The cells of multicellular organisms contain the same genomic material but a number of distinct differentiated cell types. This is brought about by a complex and dynamic regulatory network that controls which subsets of genes are switched on and off in the different cell types. Though gene regulation studies have historically focused on genomic interactions, gene expression is controlled at both the

transcriptional and post-transcriptional levels through a variety of mechanisms. In addition, changes in chromatin modifications play an important role in regulating gene expression. Because the DNA is packaged as nucleosomes, histone modifications and DNA methylation play a large regulatory role by altering chromatin structure, which influences whether or not the DNA is accessible for

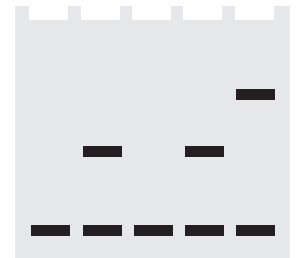
CO-IMMUNOPRECIPITATION ASSAY

Active Motif's Nuclear Complex Co-IP Kit provides an optimized nuclear extraction method that preserves fragile complexes of DNA-binding proteins. This makes it ideal for the study of protein/protein interactions in the nucleus.

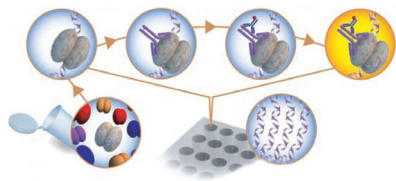


GELSHIFT ASSAY

The Gelshift™ Chemiluminescent EMSA kit is an easy-to-use assay to detect and measure protein-DNA binding. It greatly improves on the traditional gelshift technique by replacing radioactivity with a more sensitive, chemiluminescent detection method.



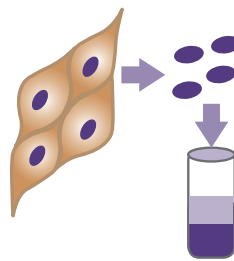
TRANSCRIPTION FACTOR BINDING



TransAM® Kits are plate based assays that facilitate the study of transcription factor activation in mammalian tissue and cell extracts.

Assays are available for over 40 transcription factors. In addition, Active Motif offers a wide range of transcription factor antibodies and recombinant proteins.

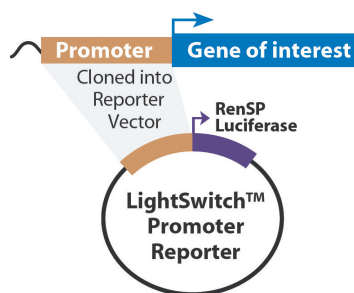
ENRICH FOR NUCLEAR PROTEINS



The Nuclear Extract Kit isolates high-quality nuclear, cytoplasmic or whole-cell extract from mammalian cell or tissue samples. Extracts are suitable for use in a various applications including EMSA, Western blot and binding assays. The kit includes protease and phosphatase inhibitors to ensure preservation of your proteins.

LUCIFERASE REPORTER ASSAYS

The LightSwitch™ Luciferase Assay System includes over 18,000 promoters cloned from the human genome into transfection-ready reporter vectors, eliminating the time and effort of cloning the promoters needed for your transcriptional regulation studies.



PROTEASE & PHOSPHATASE INHIBITORS

Prevent proteolytic degradation during lysis and extraction procedures. The Protease Inhibitor Cocktail contains a broad spectrum of inhibitors targeting cysteine, serine and aspartic acid proteases, and aminopeptidases. The Phosphatase Inhibitor Cocktail is provided as a ready-to-use solution of inhibitors targeting both serine/threonine phosphatases and protein tyrosine phosphatases.

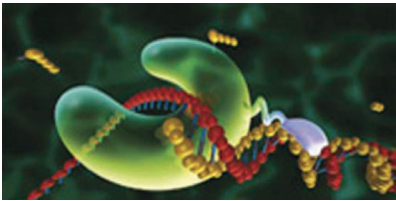


transcription. There are a number of tools and techniques for studying the intricate interplay between DNA and the proteins that make up the gene regulatory network. These include assays to identify transcription factor binding, co-immunoprecipitation methods to identify protein complexes that associate with transcription factors and DNA, as well as ChIP assays to identify modifications in histones associated

with active and repressed states.

Active Motif offers a number of tools for studying each of these types of gene regulation. For more complete information and a full listing of available kits, antibodies and proteins to enable your gene regulation research, please visit us at www.activemotif.com.

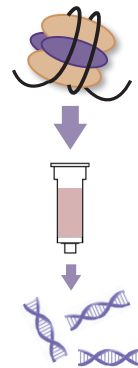
FULLY VALIDATED ChIP KITS



Active Motif offers a complete selection of validated kits and reagents to help you, whether you are performing ChIP for

the first time or are an expert in need of a specialized ChIP protocol. Active Motif ChIP kits have been cited in hundreds of publications, earning us the reputation as the world leader in ChIP technology.

ChIP DNA CLEANUP



Active Motif's Chromatin IP DNA Purification Kit makes it possible to quickly clean up your ChIP DNA samples and get them ready for analysis, without the need for phenol/chloroform extraction. Unlike other DNA purification columns, our kit is optimized for use with chromatin. Purified DNA is ready for use in a variety of applications including library construction and ChIP-Seq.

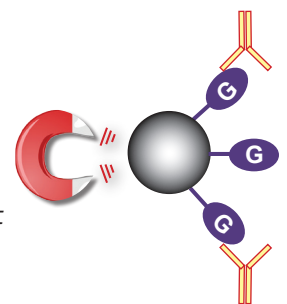
READY TO ChIP PROTEIN G COLUMNS

For researchers interested in streamlining their workflow, Active Motif offers Protein G Agarose Columns. These have been specifically engineered to greatly reduce non-specific binding. Simply add the ChIP reaction to the columns and use the cap to seal.



PROTEIN G MAGNETIC BEADS FOR ChIP & CO-IP

For researchers with established lab protocols or who are adopting protocols published in scientific literature, Active Motif offers ready-to-use protein G-coated magnetic particles. Our ChIP-IT® Protein G Magnetic Beads represent a rigorously tested and proven technology specifically engineered to greatly reduce non-specific binding.



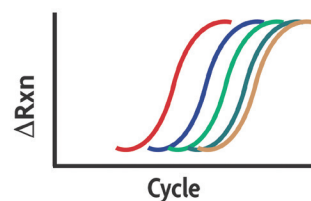
TISSUE AND CELL DISRUPTION



Whether you are analyzing cell lysates by Western blot or preparing chromatin for a chromatin immunoprecipitation (ChIP) experiment, the ability to obtain reliable results depends on accurate cell lysis. Active Motif's Dounce

homogenizer is ideal for preparation of cell lysates or chromatin, particularly if the cell and tissue samples seem to be resistant to lysis under normal detergent conditions.

CONTROL PRIMER SETS



Active Motif offers a large variety of qPCR primer sets for use as positive and negative controls for many of the more common ChIP targets. Use of our primer sets will save you the time and effort required to design, synthesize and test your own species/gene-specific control primers. Each primer set has been tested in multiple cell lines for various proteins or histone modifications and proven to work in both qPCR and endpoint PCR.

Description	Format	Cat. No.
Nuclear Extract Kit	100 rxns	40010
	400 rxns	40410
Universal Magnetic Co-IP Kit	25 rxns	54002
Gelshift™ Chemiluminescent EMSA	100 rxns	37341
Protease Inhibitor Cocktail	1 ml	37490
	5 ml	37491
Phosphatase Inhibitor Cocktail	1 ml	37492
	5 ml	37493
LightSwitch™ Luciferase Assay Kit	100 assays	32031
	1000 assays	32032
LightSwitch™ Dual Assay Kit	100 assays	32035
Cypridina TK Control Vector	5 µg	32036
LightSwitch™ Transfection Optimization Kit	1 kit	32041
FuGENE® HD Transfection Reagent	0.2 ml	32042
	0.5 ml	32043
DharmaFECT® Duo Transfection Reagent	0.2 ml	32044
	0.75 ml	32045
TransAM® AML/Runx	96-well plate	47396
TransAM® AP-1 Family	2 x 96-well plate	44296
TransAM® ATF-2	96-well plate	42396
TransAM® c-Myc	96-well plate	43396
TransAM® C/EBP α/β	96-well plate	44196
TransAM® CREB (pCREB also available)	96-well plate	42096
TransAM® Elk-1	96-well plate	44396
TransAM® ER	96-well plate	41396
TransAM® FKHR (FOXO1)	96-well plate	46396
TransAM® GATA Family	2 x 96-well plate	48296
TransAM® GR	96-well plate	45496
TransAM® HIF-1	96-well plate	47096
TransAM® HNF Family	2 x 96-well plate	46296
TransAM® IRF-3 (IRF-7 also available)	96-well plate	48396
TransAM® MAPK Family	2 x 96-well plate	47296
TransAM® MEF2	96-well plate	43196
TransAM® MyoD	96-well plate	47196
TransAM® NF-YA	96-well plate	40396
TransAM® NFATc1	96-well plate	40296
TransAM® NFκB (Multiple kits/formats available)	please visit our website	
TransAM® Nrf2	96-well plate	50296
TransAM® Oct-4	96-well plate	42496
TransAM® p53	96-well plate	41196
TransAM® PPARγ	96-well plate	40196
TransAM® Sp1 (Sp1/Sp3 also available)	96-well plate	41296
TransAM® STAT Family Kits	2 x 96-well plate	42296
TransAM® T-bet	96-well plate	51396

Most kits also available in 5 x 96-well plate formats.
Visit activemotif.com/transam for a complete listing.

Description	Format	Cat. No.
ChIP-IT® Express	25 rxns	53008
ChIP-IT® Express Enzymatic	25 rxns	53009
ChIP-IT® High Sensitivity	16 rxns	53040
ChIP-IT® FFPE	16 rxns	53045
ChIP-IT® FFPE Chromatin Preparation Kit	5 rxns	53030
ChIP-IT® PBMC	16 rxns	53042
ChIP-IT® ChIP-Seq	10 libraries	53041
ChIP-exo Kit	12 rxns	53043
Chromatin IP DNA Purification Kit	50 rxns	58002
ChIP-IT® Protein G Magnetic Beads	40 rxns (1 ml)	53033
	200 rxns (5 ml)	53034
Protein G Agarose Columns	30 rxns	53039
EpiShear™ Probe Sonicator	110V	53051
Dounce Homogenizer	1 ml	40401
	15 ml	40415
Human Negative Control Primer Set 1	96 rxns	71001
Human Negative Control Primer Set 2	96 rxns	71002
Human Negative Control Primer Set 3	96 rxns	71023
Human Positive Control Primer Set ACTB-1	96 rxns	71003
Human Positive Control Primer Set ACTB-2	96 rxns	71005
Human Positive Control Primer Set CCND2	96 rxns	71008
Human Positive Control Primer Set GAPDH-1	96 rxns	71004
Human Positive Control Primer Set GAPDH-2	96 rxns	71006
Human Positive Control Primer Set GEMIN4	96 rxns	71010
Human Positive Control Primer Set MYT1	96 rxns	71007
Mouse Negative Control Primer Set 1	96 rxns	71011
Mouse Negative Control Primer Set 2	96 rxns	71012
Mouse Negative Control Primer Set 3	96 rxns	71013
Mouse Negative Control Primer Set 4	96 rxns	71014
Mouse Positive Control Primer Set Actb-1	96 rxns	71015
Mouse Positive Control Primer Set Actb-2	96 rxns	71017
Mouse Positive Control Primer Set Gapdh-1	96 rxns	71016
Mouse Positive Control Primer Set Gapdh-2	96 rxns	71018
Mouse Positive Control Primer Set GriK3	96 rxns	71021
Mouse Positive Control Primer Set Hoxc10	96 rxns	71019
Mouse Positive Control Primer Set Pax-2	96 rxns	71020
Rat Negative Control Primer Set 1	96 rxns	71024
Rat Negative Control Primer Set 2	96 rxns	71025
Rat Positive Control Primer Set Actb	96 rxns	71026
Rat Positive Control Primer Set Gapdh	96 rxns	71027
<i>Drosophila</i> Negative Control Primer Set 1	96 rxns	71028
<i>Drosophila</i> Negative Control Primer Set 2	96 rxns	71029
<i>Drosophila</i> Positive Control Primer Set Gapdh1	96 rxns	71031
<i>S. cerevisiae</i> Negative Control Primer Set 1	96 rxns	71032
<i>S. cerevisiae</i> Positive Control Primer Set ACT1	96 rxns	71033
Zebrafish Negative Control Primer Set 1	96 rxns	71034
Zebrafish Negative Control Primer Set 2	96 rxns	71035