NR Sandwich
AR ELISA

Catalog Nos. 49196 & 49696

(version B1)

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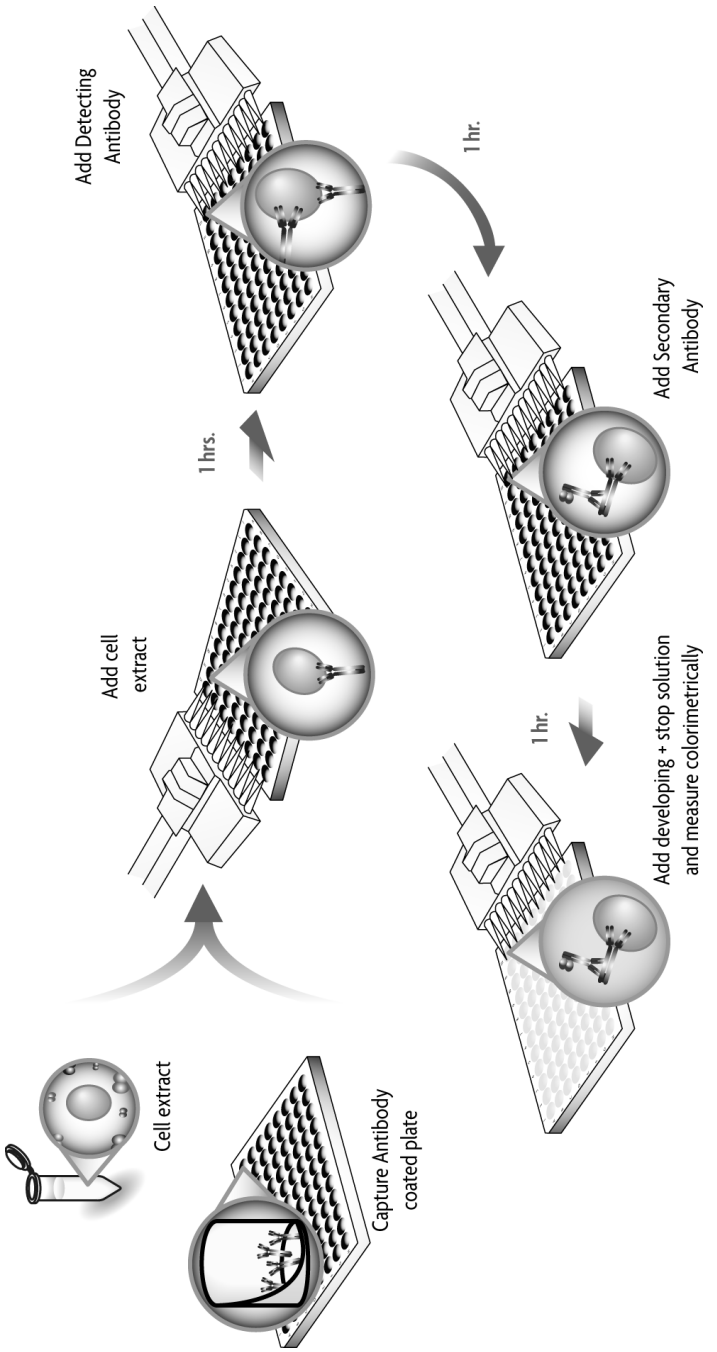
Overview

Androgen Receptor (AR) belongs to the nuclear receptor (NR) superfamily of structurally related ligand-inducible transcription factors[1]. NRs act in combination with other transcription factors to regulate the expression of gene networks involved in cell growth and development, apoptosis, homeostasis, inflammation, lipid metabolism, the reproductive cycle and other fundamental biological processes. AR expression plays an important role in the proliferation of human prostate cancer and also confers a better prognosis in breast cancer[2, 3]. Because of AR's critical role in cell biology, it is important to measure the total amounts of AR contained in different cell types and tissues. Traditional methods for monitoring AR protein levels, such as Western blotting, EMSA, immunohistochemistry (IHC) and reporter gene assays, are time consuming and not suitable to high-throughput applications.

With its NR Sandwich ELISAs, Active Motif is introducing the first ELISA-based kits to detect total amounts of nuclear receptor proteins. The NR Sandwich AR Kit simplifies the measurement of AR contained in cell and tissue samples by using the "Sandwich ELISA" method for detecting a protein. This method uses two antibodies that each recognize a distinct epitope on the protein of interest. The kit provides an ELISA plate that is coated with the first antibody, called the Capture Antibody, which is used to capture the protein from the sample. The second antibody, called the Detecting Antibody, is used to detect the protein bound by the Capture Antibody. An HRP-conjugated Secondary Antibody is then used to quantitate the amount of bound Detecting Antibody. Subsequent incubation with developing solution provides an easily quantified colorimetric readout. NR Sandwich AR is available in two sizes:

product	format	catalog no.
NR Sandwich AR	1 x 96-well plate	49196
	5 x 96-well plates	49696

Flow Chart of Process



Androgen Receptor

Androgens play an important role in the development, maintenance and regulation of the reproductive physiology of adult males, including maintenance of the prostate. Androgens exert their effects via the intracellular androgen receptor (AR), which belongs to the nuclear receptor (NR) superfamily of ligand-regulated transcription factors. Like other members of the NR family, AR consists of an N-terminal modulating domain, a central DNA binding domain, a hinge region and a C-terminal ligand-binding domain[4]. AR expression plays a critical role in the proliferation of human prostate cancer and also confers a better prognosis in breast cancer[2, 3].

Primary prostatic cancers are largely dependent on androgens for growth and survival. Patients with prostate cancer are usually subjected to hormonal therapy by either androgen deprivation and/or blockade of AR with anti-androgens. These treatments are beneficial in the early stages of cancer but eventually lead to relapse of androgen-insensitive cancers. Paradoxically, many hormone-insensitive prostate cancers are found to be positive for AR, suggesting AR may contribute to the progression of androgen-independent prostate cancer. Mutations in the AR gene are rare in hormone-refractory prostate cancer and do not play an important role. Instead, the amplification and consequent overexpression of the wild-type AR gene appears to be the most common alteration involving AR in hormone-refractory prostate cancer[5-8]. AR gene amplification has been reported in about 30% of hormone-refractory tumors[9, 10], indicating AR's regulatory role in tumor growth from patients with clinically defined androgen-independent prostate cancer[11]. The expression of AR is reportedly inversely correlated with histologic grade: well-differentiated prostate tumors show higher expression than the poorly differentiated tumors. In prostate cancer, AR has been proposed as a marker of hormone-responsiveness.

Androgens are also of biological and clinical importance for the growth and development of breast cancer in women. ARs are present in about 60% of breast carcinomas and about 18% of AR-positive cells lack ER and PR[12]. AR has also been shown to be a predictor of tumor differentiation[13].

Traditional Nuclear Receptor Assays

To date, several methods are widely used to measure AR expression, either directly or indirectly:

1. Cellular levels of AR protein can be determined by Western blot by using antibodies specific for AR protein. This method is time consuming (up to 2 days once the nuclear extracts are prepared), and is not suitable for processing large numbers of samples.

2. The DNA-binding capacity of AR can be assayed by gel retardation, also called electrophoretic mobility shift assay (EMSA). In this method, nuclear extracts are incubated with a radioactive double-stranded oligonucleotide probe containing the consensus sequence for AR binding. If AR is active in the nuclear extract, it will bind to the probe. Samples are then resolved by electrophoresis on a native polyacrylamide gel, followed by autoradiography.

This method is sensitive, but like the previous procedure, it is time consuming (multiple days of gel exposure may be required to achieve sufficient sensitivity) and it cannot be applied to high-throughput screening. Gelshift assays also require special precautions and equipment for handling radioactivity.

3. Immunohistochemistry is also commonly performed to analyze the AR content of tissue samples. Although this method is highly sensitive and can reveal the subcellular distribution of AR protein, it is technically demanding, requires specialized equipment, and is not suitable for the analysis of a large number of samples
4. Another method used to assay AR activation is based on reporter genes, typically luciferase or β-galactosidase, placed under the control of a promoter containing an AR consensus binding site. The promoter can be artificial, made of a GC box and a TATA box, or natural. However, the procedure is limited by the following issues: (i) reporter gene assays have to be repeated several times to obtain statistically reliable data; and (ii) reporter gene assays are sensitive to confounding factors that may influence the expression level of the reporter gene; therefore, assays have to be carefully standardized.

NR Sandwich AR ELISAs

AR-regulated genes are involved in a variety of cellular pathways that are currently being deciphered by academic and pharmaceutical laboratories for new target discovery. However, there is a lack of standardized assays that measure cellular levels of AR.

To overcome this, Active Motif has introduced the NR Sandwich AR to monitor the expression levels of AR in cell and tissue samples. The NR Sandwich AR ELISA Kit uses the "Sandwich ELISA" method for detecting a protein. This method uses two antibodies that each recognize a distinct epitope on the protein of interest. The kit provides an ELISA plate that is coated with the first antibody, called the Capture Antibody, which is used to capture the protein from the sample. The second antibody, called the Detecting Antibody, is used to detect the protein bound by the Capture Antibody. An HRP-conjugated Secondary Antibody is then used to quantitate the amount of bound Detecting Antibody. Subsequent incubation with developing solution provides an easily quantified colorimetric readout. Once the samples are prepared, this assay is completed in less than 4 hours. As this assay is performed in 96-well plates, a large number of samples can be handled simultaneously, enabling high-throughput automation. This assay is specific for AR and can be used to detect AR in as little as 0.6 µg of nuclear extract from LNCaP cells.

The NR Sandwich AR has many applications including the study of AR transcriptional activity regulation and protein structure/function studies of AR in cancer development and progression.

Kit Performance and Benefits

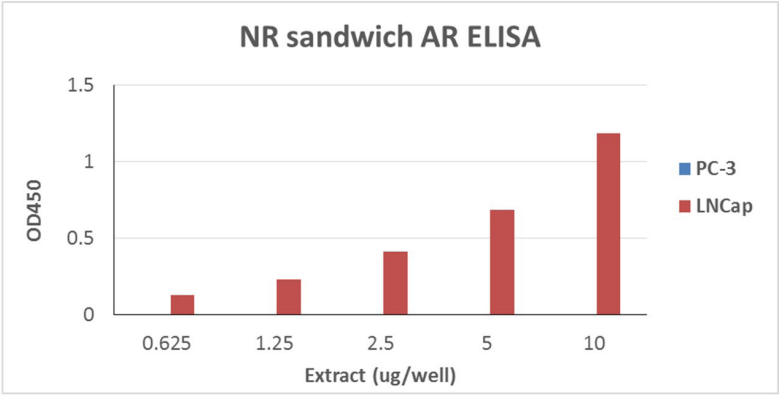
The NR Sandwich AR Kit is for research use only. Not for use in diagnostic procedures.

Detection limit: > 0.6 µg nuclear extract/well.

Range of detection: NR Sandwich AR provides quantitative results from 0.6 to 10 µg of nuclear extract/well (see graph below).

Cross-reactivity: NR Sandwich AR detects AR from human origin. This assay is not recommended for use with samples from mouse origin. Reactivity with other species has not been determined.

Assay time: < 4 hours.



Monitoring protein expression levels of AR using NR Sandwich. Different amounts of nuclear extracts from two human prostate cancer cell lines: LNCaP and PC-3 were analyzed for levels of AR protein using the NR Sandwich AR Kit. This data is provided for demonstration purposes only.

NR Sandwich AR ELISA Kit Components and Storage

Except for the nuclear extract that must be kept at -80°C, kit components can be stored at -20°C prior to first use. Then, we recommend storing each component at the temperature indicated in the table below.

Reagents	Quantity (1 plate / 5 plates)	Storage / Stability
AR detecting antibody	12 µl / 60 µl	4°C for 6 months
Anti-rabbit HRP-conjugated antibody (0.25 µg/µl)	12 µl / 60 µl	4°C for 6 months
LNCaP nuclear extract (5 µg/µl)	40 µl / 200 µl	-80°C for 6 months
Diluent Buffer	22 ml / 110 ml	-20°C for 6 months
10X Wash Buffer AM1	22 ml /110 ml	4°C for 6 months
Developing Solution	11 ml / 55 ml	4°C for 6 months
Stop Solution	11 ml / 55 ml	4°C for 6 months
96-well assay plate	1 / 5	4°C for 6 months
Plate sealer	1 / 5	Room temperature

Additional Materials Required

- Multi-channel pipettor
- Multi-channel pipettor reservoirs
- Rocking platform
- Microplate spectrophotometer capable of reading at 450 nm (655 nm as optional reference wavelength).

For Nuclear Extract preparation

- Hypotonic Buffer
- Phosphatase Inhibitor Buffer
- 10X PBS
- Detergent (NP-40)
- Lysis Buffe

Buffer Preparation and Recommendations

Preparation of 1X Wash Buffer

Prepare the amount of 1X Wash Buffer required for the assay as follows: For every 10 ml of 1X Wash Buffer required, dilute 1 ml 10X Wash Buffer AM1 with 9 ml distilled water (see the Quick Chart for Preparing Buffers and Controls in this section). Mix gently to avoid foaming. The 1X Wash Buffer may be stored at 4°C for one week. The Tween 20 contained in the 10X Wash Buffer AM1 may form clumps, therefore homogenize the buffer by vortexing for 2 minutes prior to use.

Preparation of the Antibody Binding Buffers

Dilute the AR detecting antibody to 1:1,000 and anti-rabbit HRP-conjugated secondary antibody to 1:1,000 with the Diluent Buffer (see the Quick Chart in this section). Use 50 µl of diluted antibody per well. Depending on the particular assay, the signal:noise ratio may be optimized by using higher dilutions of both antibodies. This may decrease the sensitivity of the assay.

Developing Solution

The Developing Solution must be warmed to room temperature before use. This solution is light sensitive, therefore, we recommend avoiding direct exposure to intense light during storage. The Developing Solution may develop a yellow hue over time. This does not affect product performance. A blue color present in the solution indicates that it has been contaminated and must be discarded. Prior to use, transfer the amount of Developing Solution required for the assay into a secondary container (see the Quick Chart for Preparing Buffers in this section), avoid direct exposure to intense light and leave at room temperature for at least 1 hour. After use, discard any remaining solution that was transferred into the secondary container.

Stop Solution

Prior to use, transfer the amount of Stop Solution required for the assay into a secondary container (see the Quick Chart for Preparing Buffers and Controls in this section). After use, discard remaining Stop Solution.

WARNING: The Stop Solution is corrosive. Wear personal protective equipment when handling, *i.e.* safety glasses, gloves and labcoat.

Nuclear Extract

The LNCaP nuclear extract is provided as a positive control to ensure that the kit reagents are functional. Sufficient extract is provided for 40 reactions. This extract is optimized to give a strong signal when used at 5 µg/well. We recommend aliquoting the extract in 5 µl fractions and storing at -80°C. Avoid multiple freeze/thaw cycles of the extract. Various cell extracts are available from Active Motif (see Appendix, Section B. Related Products).

Quick Chart for Preparing Buffers and Controls

Reagents to Prepare	Components	For 1 well	For 1 strip (8 wells)	For 6 strips (48 wells)	For 12 strips (96 wells)
1X Wash Buffer	Distilled water	2.025 ml	16.2 ml	97.2 ml	187.2 ml
	10X Wash Buffer AM1	225.0 µl	1.8 ml	10.8 ml	20.8 ml
	TOTAL REQUIRED	**2.25 ml**	**18.0 ml**	**108.0 ml**	**208.0 ml**
Detecting Antibody	AR antibody	0.05 µl	0.45 µl	2.6 µl	5.2 µl
	Diluent Buffer	55.0 µl	450.0 µl	2.6 ml	5.2 ml
	TOTAL REQUIRED	**55.05 µl**	**450.5 µl**	**2.6 ml**	**5.20 ml**
Secondary Antibody	HRP-conjugated antibody	0.05 µl	0.45 µl	2.6 µl	5.2 µl
	Diluent Buffer	55.0 µl	450 µl	2.6 ml	5.2 ml
	TOTAL REQUIRED	**55.05 µl**	**450.45 µl**	**2.6 ml**	**5.2 ml**
Developing Solution	**TOTAL REQUIRED**	**110 µl**	**900 µl**	**5.2 ml**	**10.4 ml**
Stop Solution	**TOTAL REQUIRED**	**110 µl**	**900 µl**	**5.2 ml**	**10.4 ml**

* The above volumes include an excess of components

Assay Protocol

Read the entire protocol before use.

NR Sandwich AR Assay

Determine the appropriate number of microwell strips required for testing samples, controls and blanks in duplicate. If less than 8 wells in a strip are to be used, cover the unused wells with a portion of the plate sealer while the assay is performed. The content of these wells is stable at room temperature if kept dry. Store the unused strips in the aluminum pouch at 4°C. Use the strip holder for the assay.

Multi-channel pipettor reservoirs may be used for dispensing the 1X Wash Buffer, Antibody Binding Buffers and Developing and Stop Solution into the wells being used.

Step A: Binding of AR to the capture antibody

1. Please refer to the Buffer Preparation and Recommendation section before starting the protocol.

   Sample wells: Add 50 µl of sample diluted in Diluent Buffer to each well to be used. We recommend using 5 to 50 µg of nuclear extract diluted in Diluent Buffer per well. A protocol for preparing nuclear extracts can be found on page 10.

   Control wells: Add 5 µg of the provided LNCaP nuclear extract diluted in 50 µl of Diluent Buffer to each well to be used (1 µl of extract in 49 µl of Diluent Buffer per well) .

   Blank wells: Add 50 µl Diluent Buffer only per well.

2. Use the provided adhesive cover to seal the plate. Incubate for 1 hour at room temperature with mild agitation (100 rpm on a rocking platform).
3. Wash each well 3 times with 200 µl 1X Wash Buffer. For each wash, flip the plate over a sink to empty the wells, then tap the inverted plate 3 times on absorbent paper towels.

Step B: Binding of the detecting antibody

1. Add 50 µl diluted AR antibody (1:1,000 dilution in Diluent Buffer) to all wells being used.
2. Cover the plate and incubate for 1 hour at room temperature with gentle rocking.
3. Wash the wells 3 times with 200 µl 1X Wash Buffer (as described in Step 1, No. 3)

Step C: Binding of the secondary antibody

1. Add 50 µl of diluted anti-rabbit HRP-conjugated antibody (1:1,000 dilution in Diluent Buffer) to all wells being used.
2. Cover the plate and incubate for 1 hour at room temperature with gentle rocking.
3. During this incubation, place the Developing Solution at room temperature.
4. Wash the wells 4 times with 200 µl 1X Washing Buffer (as described in Step 1, No. 3).

Step D: Colorimetric detection

1. Transfer the amount of Developing Solution required for the assay into a secondary container. Add 100 µl Developing Solution to all wells being used.
2. Incubate 2-10 minutes at room temperature protected from direct light. Please read the Certificate of Analysis supplied with this kit for the optimal development time for this specific kit lot, which varies from lot to lot. Monitor the blue color development in the sample and positive control wells until it turns medium to dark blue. Do not overdevelop.
3. Add 100 µl Stop Solution. In presence of the acid, the blue color turns yellow.
4. Read absorbance on a spectrophotometer within 5 minutes at 450 nm with an optional reference wavelength of 655 nm. Blank the plate reader according to the manufacturer's instructions using the blank wells.

References

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Appendix

Section A. Preparation of Nuclear Extract

For your convenience, Active Motif offers a Nuclear Extract Kit (Cat. Nos. 40010 & 40410) which can be used for preparing nuclear, cytoplasmic and whole-cell extract. If you prefer to make your own buffers, please refer to the following protocol.

This procedure can be used for a confluent cell layer of 75 cm^2 (100 mm dish). The yield is approximately 0.5 mg of nuclear proteins for 10^7 cells.

1. Wash cells with 10 ml of ice-cold PBS/PIB.
2. Add 10 ml of ice-cold PBS/PIB and scrape the cells off the dish with a cell lifter. Transfer the cells into a pre-chilled 15 ml tube and spin at 300 x *g* for 5 minutes at 4°C.
3. Resuspend the pellet in 1 ml of ice-cold HB buffer by gentle pipetting and transfer the cells into a pre-chilled 1.5 ml tube.
4. Allow the cells to swell on ice for 15 minutes.
5. Add 50 µl 10% Nonidet P-40 (0.5% final) and mix by gentle pipetting.
6. Centrifuge the homogenate for 30 seconds at 4°C in a microcentrifuge.
7. Discard the supernatant (which contains the cytoplasm and RNA) carefully without disturbing the pellet. Resuspend the nuclear pellet in 50 µl Complete Lysis Buffer and rock the tube gently on ice for 30 minutes on a shaking platform.
8. Centrifuge for 10 minutes at 14,000 x *g* at 4°C and save the supernatant (nuclear extract). Aliquot and store at -80°C. Avoid freeze/thaw cycles.
9. Determine the protein concentration of the extract by using a Bradford-based assay.

10X PBS	**For 250 ml, mix:**
0.1 M phosphate buffer, pH 7.5	3.55 g Na_2HPO_4 + 0.61 g KH_2PO_4
1.5 M NaCl	21.9 g
27 mM KCl	0.5 g

Adjust to 250 ml with distilled water. Prepare a 1X PBS solution by adding 10 ml 10X PBS to 90 ml distilled water. Sterilize the 1X PBS by filtering through a 0.2 µm filter. The 1X PBS is at pH 7.5. Store the filter-sterilized 1X PBS solution at 4°C.

PIB (Phosphatase Inhibitor Buffer)	**For 10 ml, mix**
125 mM NaF	52 mg
250 mM beta-glycerophosphate	0.55 g
250 mM para-nitrophenyl phosphate (PNPP)	1.15 g
25 mM $NaVO_3$	31 mg

Adjust to 10 ml with distilled water. Mix the chemicals by vortexing. Incubate the solution at 50°C

for 5 minutes. Mix again. Store at -20°C.

PBS/PIB

Prior to use, add 0.5 ml PIB to 10 ml 1X PBS.

HB (Hypotonic Buffer)	**For 50 ml, mix:**
20 mM Hepes, pH 7.5	0.24 g
5 mM NaF	12 mg
10 µM Na_2MoO_4	5 µl of a 0.1 M solution
0.1 mM EDTA	10 µl of a 0.5 M solution

Adjust pH to 7.5 with 1 N NaOH. Adjust volume to 50 ml with distilled water. Sterilize by filtering through a 0.2 µm filter. Store the filter-sterilized solution at 4°C.

Lysis Buffer	**For 50 ml, mix:**
20 mM Hepes, pH 7.5	0.24 g
400 mM NaCl	1.17 g
0.1 mM EDTA	1.5 mg
10 mM NaF	21 mg
10 µM Na_2MoO_4	0.12 mg
1 mM $NaVO_3$	6.1 mg
20% glycerol	10 ml
10 mM PNPP	0.23 g
10 mM beta-glycerophosphate	0.11 g

Adjust pH to 7.5 with 1 N NaOH. Adjust volume to 50 ml with distilled water. Store at 4°C. Just before use, make up Complete Lysis Buffer by adding 1 µl of 1 M DTT and 10 µl of Protease Inhibitor Cocktail (Active Motif, Cat. Nos. 37490 & 37491) per ml of Lysis Buffer.

Section B: Troubleshooting Guide

Problem/question	Possible cause	Recommendation
No signal or weak signal	Omission of key reagent	Check that all reagents have been added in all wells in the correct order
	Substrate or conjugate is no longer active	Test conjugate and substrate for activity by mixing HRP and Developing Solution together
	Enzyme inhibitor present	Sodium azide will inhibit the peroxidase reaction. Follow our recommendations to prepare buffers
	Plate reader settings not optimal	Verify the wavelength and filter settings
	Incorrect assay temperature	Bring Developing Solution and Stop Solution to room temperature before using
	Inadequate volume of Developing Solution	Check to make sure that correct volume is delivered by pipette
High background in all wells	Measurement time too long	Stop enzymatic reactions as soon as the positive wells turn medium-dark blue
	Concentration of antibodies is too high	Increase antibody dilutions
	Inadequate washing	Ensure all wells are filled with Wash Buffer and follow washing recommendations
Uneven color development	Incomplete washing of wells	Ensure all wells are filled with Wash Buffer and follow washing recommendations
	Well cross-contamination	Follow washing recommendations
High background in sample wells	Too much nuclear extract per well	Decrease amount of nuclear extract down to 1-2 µg/well
	Concentration of antibodies is too high	Perform antibody titration to determine optimal working concentration. Start using 1:2,000 for primary antibody and 1:5,000 for the secondary antibody. The sensitivity of the assay will be decreased
No signal or weak signal in sample wells	Not enough nuclear extract per well	Increase amount of nuclear extract. Not to exceed 50 µg/well
	Too many freeze/thaw cycles of extract	Aliquot extract into 5 µl aliquots and store at -80°C to avoid multiple freeze/thaws
	AR is poorly activated or inactivated in nuclear fractions	Perform a time course for AR activation in the studied cell line
	Nuclear extracts are not from correct species	Refer to cross-reactivity information on page 5
	Salt concentration too high in binding reaction	Reduce amount of extract per well or dialyze extract before use

Section C. Related Products

Transcription Factor ELISAs	Format	Catalog No.
TransAM™ AML-1/Runx1	1 x 96-well plate	47396
TransAM™ AML-3/Runx2	1 x 96-well plate	44496
TransAM™ AP-1 Family	2 x 96-well plates	44296
TransAM™ AP-1 c-Fos	1 x 96-well plate	44096
TransAM™ AP-1 c-Jun	1 x 96-well plate	46096
TransAM™ AP-1 FosB	1 x 96-well plate	45096
TransAM™ AP-1 JunD	1 x 96-well plate	43496
TransAM™ ATF-2	1 x 96-well plate	42396
TransAM™ c-Myc	1 x 96-well plate	43396
TransAM™ C/EBP α/β	1 x 96-well plate	44196
TransAM™ CREB	1 x 96-well plate	42096
TransAM™ pCREB	1 x 96-well plate	43096
TransAM™ Elk-1	1 x 96-well plate	44396
TransAM™ ER	1 x 96-well plate	41396
TransAM™ FKHR (FOXO1/4)	1 x 96-well plate	46396
TransAM™ GATA Family	2 x 96-well plates	48296
TransAM™ GATA-4	1 x 96-well plate	46496
TransAM™ GR	1 x 96-well plate	45496
TransAM™ HIF-1	1 x 96-well plate	47096
TransAM™ HNF Family	2 x 96-well plates	46296
TransAM™ HNF-1	1 x 96-well plate	46196
TransAM™ IRF-3 (Human)	1 x 96-well plate	48396
TransAM™ IRF-3 (Mouse)	1 x 96-well plate	48496
TransAM™ IRF-7	1 x 96-well plate	50196
TransAM™ MAPK Family	2 x 96-well plates	47296
TransAM™ MEF2	1 x 96-well plate	43196
TransAM™ MyoD	1 x 96-well plate	47196
TransAM™ NF-YA	1 x 96-well plate	40396
TransAM™ NFATc1	1 x 96-well plate	40296
TransAM™ NFκB Family	2 x 96-well plates	43296
TransAM™ Flexi NFκB Family	2 x 96-well plates	43298
TransAM™ NFκB p50	1 x 96-well plate	41096
TransAM™ NFκB p50 Chemi	1 x 96-well plate	41097
TransAM™ Flexi NFκB p50	1 x 96-well plate	41098
TransAM™ NFκB p52	1 x 96-well plate	48196
TransAM™ NFκB p52 Chemi	1 x 96-well plate	48197
TransAM™ NFκB p65	1 x 96-well plate	40096
TransAM™ NFκB p65 Chemi	1 x 96-well plate	40097
TransAM™ Flexi NFκB p65	1 x 96-well plate	40098
TransAM™ Nrf2	1 x 96-well plate	50296
TransAM™ Oct-4	1 x 96-well plate	42496
TransAM™ p53	1 x 96-well plate	41196
TransAM™ PPARγ	1 x 96-well plate	40196
TransAM™ Sp1	1 x 96-well plate	41296
TransAM™ Sp1/Sp3	1 x 96-well plate	40496
TransAM™ STAT Family	2 x 96-well plates	42296
TransAM™ STAT3	1 x 96-well plate	45196
TransAM™ T-bet	1 x 96-well plate	51396

For a complete, up-to-date list of available TransAM™ Kits, please visit **www.activemotif.com/transam**

Function ELISA	Format	Catalog No.
FunctionELISA IκBα	1 x 96-well plate	48005

Recombinant Proteins	Format	Catalog No.
Recombinant c-Fos protein	5 µg	31115
Recombinant c-Jun protein	5 µg	31116
Recombinant c-Myc protein	5 µg	31117
Recombinant CREB protein	25 µg	31107
Recombinant eIF2a protein	25 µg	31108
Recombinant NFkB p50 protein	5 µg	31101
Recombinant NFkB p65 protein	5 µg	31102
Recombinant p53 protein	5 µg	31103
Recombinant p300 protein	4 µg	31124
Purified Sp1 protein	2 µg	31137
Recombinant STAT3 protein	10 µg	31140

Histone ELISAs	Format	Catalog No.
Histone H3 monomethyl Lys4 ELISA	1 x 96 rxns	53101
Histone H3 dimethyl Lys4 ELISA	1 x 96 rxns	53112
Histone H3 trimethyl Lys4 ELISA	1 x 96 rxns	53113
Histone H3 dimethyl Lys9 ELISA	1 x 96 rxns	53108
Histone H3 trimethyl Lys9 ELISA	1 x 96 rxns	53109
Histone H3 monomethyl Lys27 ELISA	1 x 96 rxns	53104
Histone H3 trimethyl Lys27 ELISA	1 x 96 rxns	53106
Histone H3 phospho Ser10 ELISA	1 x 96 rxns	53111
Histone H3 phospho Ser28 ELISA	1 x 96 rxns	53100
Total Histone H3 ELISA	1 x 96 rxns	53110

Histone Purification & Chromatin Assembly	Format	Catalog No.
Histone Purification Kit	10 rxns	40025
Histone Purification Mini Kit	10 rxns	40026
Chromatin Assembly Kit	10 rxns	53500
HeLa Core Histones	36 µg	53501

Co-Immunoprecipitation	Format	Catalog No.
Nuclear Complex Co-IP Kit	50 rxns	54001
Universal Magnetic Co-IP Kit	25 rxns	54002

DNA Methylation	Format	Catalog No.
MethylCollector™ Ultra	30 rxns	55005
UnMethylCollector™	30 rxns	55004
Fully Methylated Jurkat DNA	10 µg	55003

SUMOylation	Format	Catalog No.
SUMOlink™ SUMO-1 Kit	20 rxns	40120
SUMOlink™ SUMO-2/3 Kit	20 rxns	40220

Technical Services

If you need assistance at any time, please call Active Motif Technical Service at one of the numbers listed below.

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