abcam

ab9474

# Anti-Androgen Receptor antibody [AR 441]

Anti-Androgen Receptor antibody [AR 441] (ab9474) is a mouse monoclonal antibody detecting Androgen Receptor in **Flow Cytometry (Intra), IHC-P**. Suitable for **Human**.

- Over 50 publications
- Trusted since 2002

Lab Essentials

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.3 - 7.5 Preservative: 0.09% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Synthetic Peptide within Human AR aa 300-350. The exact immunogen used to generate this antibody is proprietary information. Database link P10275 |
| **Clone number** | AR 441 |
| **Purification technique** | Affinity purification Protein G |
| **Specificity** | This antibody is specific to a protein of 110 kD, identified as androgen receptor. This antibody reacts with full length androgen receptor and also with the newly described A form of the receptor. This antibody does not cross react with estrogen, progesterone or glucocorticoid receptors. |
| **Light chain type** | unknown |
| **Purification notes** | purified immunoglobulin fraction. |

## Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/25 - 1/50 |
| **Notes** | Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

### Predicted

| | |
|---|---|
| **Species** | Macaque monkey |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Macaque monkey |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information AR

| | |
|---|---|
| **Function** | Steroid hormone receptors are ligand-activated transcription factors that regulate eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues (PubMed:19022849). Transcription factor activity is modulated by bound coactivator and corepressor proteins like ZBTB7A that recruits NCOR1 and NCOR2 to the androgen response elements/ARE on target genes, negatively |

regulating androgen receptor signaling and androgen-induced cell proliferation (PubMed:20812024). Transcription activation is also down-regulated by NR0B2. Activated, but not phosphorylated, by HIPK3 and ZIPK/DAPK3. Isoform 3. Lacks the C-terminal ligand-binding domain and therefore constitutively regulates the transcription of a specific set of canonical AR-target genes, including PSA/KLK3 and TMPRSS2, independently of steroid hormones (PubMed:19244107, PubMed:25008967). However, some genes are differentially regulated by full-length AR (isoform 1) and isoform 3. Isoform 3-specific target genes may be regulated independently of FOXA1 expression (PubMed:25008967). Isoform 4. Lacks the C-terminal ligand-binding domain and may therefore constitutively activate the transcription of a specific set of genes independently of steroid hormones.

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**What is this antibody validated in?**
Anti-Androgen Receptor antibody [AR 441] (ab9474) is a mouse monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P) in Human samples.

**Trusted by the scientific community**
Anti-Androgen Receptor [AR 441] (ab9474) was first used in a scientific publication in 2002 and has been cited over 50 times in peer-reviewed journals.

**Reviewed by scientists**
Anti-Androgen Receptor [AR 441] (ab9474) has over 10 independent reviews from customers.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | The androgen receptor (AR) also known as NR3C4 functions mechanically as a type of nuclear receptor that is activated by binding androgens including testosterone and dihydrotestosterone. The AR has a molecular weight of approximately 110 kDa. It is expressed in various tissues notably in the prostate skeletal muscle and certain areas of the brain. Within cells AR is usually located in the cytoplasm when unbound and translocates to the nucleus upon activation by its ligands. |
| **Biological function summary** | AR interacts with androgen hormones to regulate gene expression. It forms a complex with coactivators and corepressors to modulate transcription of target genes involved in male sexual development and reproductive function. AR plays an important role in the development and maintenance of male characteristics and reproductive activity. Its expression impacts cellular processes such as proliferation differentiation and apoptosis. |
| **Pathways** | AR is intricately involved in the androgen signaling pathway which affects the regulation of genes related to male sexual characteristics. It also plays a part in the PI3K/Akt pathway influencing cell growth and survival. The AR pathway interacts with proteins such as estrogen receptors to mediate cross-talk between hormonal pathways highlighting its broad biological impacts. |
| **Associated diseases and disorders** | AR has a significant connection to prostate cancer where it drives tumor growth and progression. Mutations and overexpression of the androgen receptor are often observed in prostate cancer cells. Another condition linked to AR is androgen insensitivity syndrome where mutations in the AR gene result in partial or complete inability of cells to respond to androgenic hormones. In these conditions AR antagonists like bicalutamide are often used as treatment inhibiting the receptor's activity to manage disease progression. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

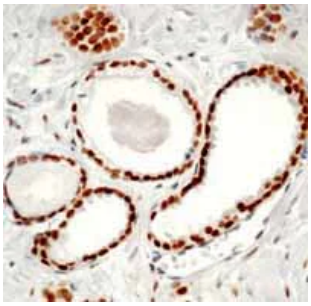
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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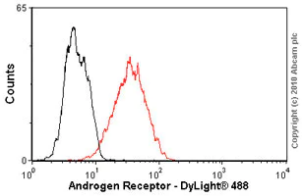
## 3 product images



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Androgen Receptor antibody [AR 441] (ab9474)

Androgen Receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Androgen Receptor antibody

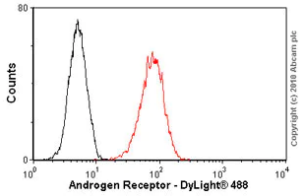
ab9474 staining human prostate by IHC-P.




### Flow Cytometry - Anti-Androgen Receptor antibody [AR 441] (ab9474)

Androgen Receptor Flow Cytometry staining using mouse Anti-Androgen Receptor antibody

Overlay histogram showing MCF-7 cells stained with ab9474 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab9474, 1/10 dilution) for 30 min at 22°C. The secondary antibody used was DyLight ® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x$10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in MCF-7 cells fixed with methanol (5 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.




### Flow Cytometry - Anti-Androgen Receptor antibody [AR 441] (ab9474)

Androgen Receptor Flow Cytometry staining using mouse Anti-Androgen Receptor antibody

Overlay histogram showing PC3 cells stained with ab9474 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab9474, 1/10 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x$10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a decreased signal in PC3 cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.