

## Basic Information

**Catalog Number:**

22089-1-AP

**Concentration:**

850 ug/ml

**Source:**

Rabbit

**Isotype:**

IgG

**Immunogen Catalog Number:**

AG17291

**GenBank Accession Number:**

BC132975

**GeneID (NCBI):**

367

**UNIPROT ID:**

P10275

**Full Name:**

androgen receptor

**Calculated MW:**

914 aa, 99 kDa

**Observed MW:**

75-80 kDa, 110-120 kDa

**Purification Method:**

Antigen affinity purification

**Recommended Dilutions:**

WB 1:5000-1:50000

IHC 1:200-1:800

IF-P 1:50-1:500

IF/ICC 1:200-1:800

## Applications

**Tested Applications:**

WB, IHC, IF/ICC, IF-P, ELISA

**Cited Applications:**

WB, IHC, IF, IP, ChIP

**Species Specificity:**

human, mouse, rat

**Cited Species:**

human, mouse, rat, pig

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

**Positive Controls:**

**WB** : LNCaP cells, HepG2 cells, MCF-7 cells, NIH/3T3 cells, mouse heart tissue, rat heart tissue

**IHC** : human prostate cancer tissue,

**IF-P** : human prostate cancer tissue,

**IF/ICC** : LNCaP cells,

## Background Information

Androgen receptor (AR) is a steroid hormone receptor for androgenic hormones such as 17 $\beta$ -Hydroxy-3-oxo-4-androstene and DHT. AR plays a vital role in developing and maintaining male sex phenotypes as well as an additional role in regulating bone metabolism. 1.What is the molecular weight of AR? Are there any isoforms of AR? The molecular weight of full-length androgen receptor (AR-B) is 110 kDa. An additional variant, AR-A, has an 87 kDa size and lacks the N-terminal 187 amino acids of AR-A (PMID: 8108393). Recently, more splice variants of AR have been discovered, raising protein products of around 80 kDa length (PMID: 19244107), as well as an AR45 variant of 45 kDa size (PMID: 15634333). AR splice variants differ in their cell line-specific expression (PMID: 24570075). 2.What is the subcellular localization of AR? AR can be present in either or both of the cytoplasm and nucleus. In androgen-deprived cells, AR is found predominantly in the cytoplasm, while stimulation by androgens causes enrichment of androgen-bound AR in the nucleus. AR shuttles between the cytoplasm and nucleus and its phosphorylation state has an impact on the subcellular localization (PMID: 16282370). 3.Is AR post-translationally modified? Post-translational modifications of the AR include phosphorylation, acetylation, methylation, SUMOylation, and ubiquitination (PMID: 21820033). These modifications have an impact on receptor stability, activity, and can change the observed molecular weight of the AR. 4.How to study AR signaling in cell culture? It is important to control levels of cell stimulation while also looking at AR signaling. Fetal bovine serum (FBS) that is typically used in cell culture contains low levels of 17 $\beta$ -Hydroxy-3-oxo-4-androstene that are enough to stimulate the growth of prostate cells (PMID: 19676093), including the LNCaP cell line that is a commonly used human prostatic carcinoma cell model (PMID: 6831420). One possibility for complete 17 $\beta$ -Hydroxy-3-oxo-4-androstene deprivation is to use charcoal stripped FBS that removes lipophilic agents, including androgens. It is also not recommended to use phenol red in your medium because it is a weak estrogen (PMID: 3458212). Cell stimulation is often conducted by DHT. 5.What is the role of AR in prostate cancer? AR plays a key role in the development and physiology of the prostate gland, and also cancer progression (PMID: 15082523). Mutations in AR altering ligands have been observed. The progression of the prostate cancer depends on AR activity and therefore blocking AR activity or lowering androgen levels is a key step related to androgen deprivation therapy (ADT).

## Notable Publications

Author	Pubmed ID	Journal	Application
Xiao Meng Zhang	33062708	J Diabetes Res	WB
Xiang Zhou	36308879	Ecotoxicol Environ Saf	WB,IF
Ying Ren	31645658	Acta Pharmacol Sin	WB

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

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For technical support and original validation data for this product please contact:

T: 4006900926

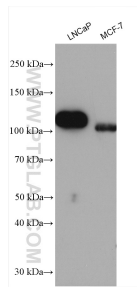
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W: [ptgcn.com](http://ptgcn.com)

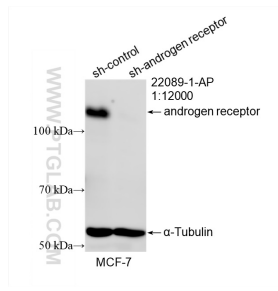
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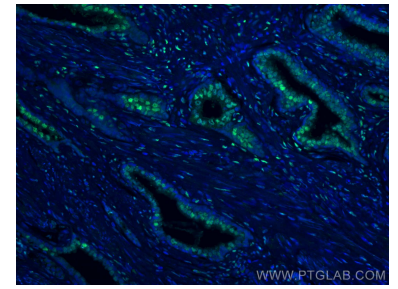
## Selected Validation Data



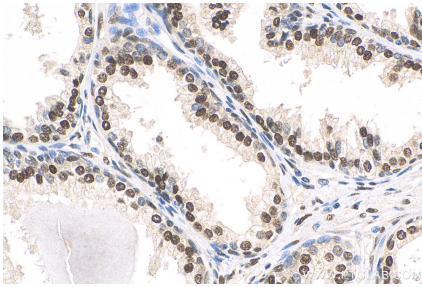
Various lysates were subjected to SDS PAGE followed by western blot with 22089-1-AP (androgen receptor antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



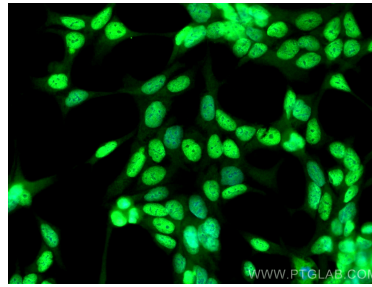
WB result of androgen receptor antibody (22089-1-AP; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-androgen receptor transfected MCF-7 cells.



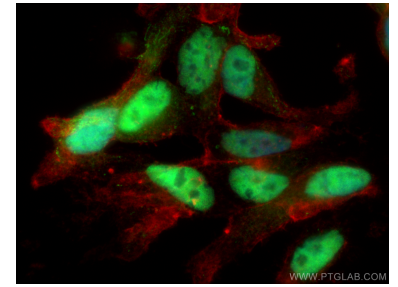
Immunofluorescent analysis of (4% PFA) fixed human prostate cancer tissue using androgen receptor antibody (22089-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L).



Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 22089-1-AP (androgen receptor antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed LNCaP cells using androgen receptor antibody (22089-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L).



Immunofluorescent analysis of (4% PFA) fixed LNCaP cells using androgen receptor antibody (22089-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).