For Research Use Only

androgen receptor Polyclonal antibody

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Catalog Number:22089-1-AP Featured Product 18 Publications

Basic Information

Catalog Number:
22089-1-AP

Size:
150ul , Concentration: 850 μg/ml by Nanodrop and 487 μg/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG17291

GenBank Accession Number:
BC132975

GeneID (NCBI):
367

Full Name:
androgen receptor

Calculated MW:
914 aa, 99 kDa

Observed MW:
75-80 kDa, 100-110 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:2000
IHC 1:20-1:200
IF 1:50-1:500

Applications

Tested Applications:
IF, IHC, WB, ELISA

Cited Applications:
IF, IHC, WB

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse

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

IHC : human prostate cancer tissue, mouse ovary tissue

IF : human prostate cancer tissue,

Background Information

Androgen receptor (AR) is a steroid hormone receptor for androgenic hormones such as 17β-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 17β-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 17β-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
Ying Ren	31645658	Acta Pharmacol Sin	WB
Tianjuan Wang	30300681	Gene	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
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E: proteintech@ptglab.com
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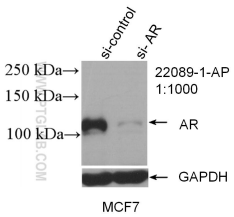
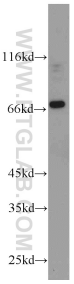
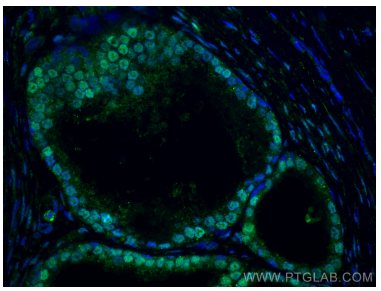
Selected Validation Data



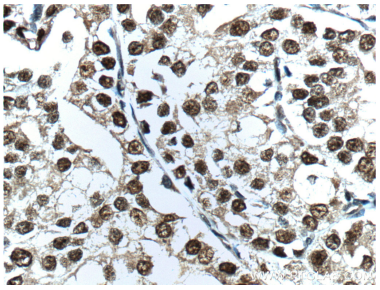
WB result of androgen receptor antibody (22089-1-AP; 1:1000; incubated at room temperature for 1.5 hours) with sh-Control and sh-androgen receptor transfected MCF-7 cells.



MCF7 cells were subjected to SDS PAGE followed by western blot with 22089-1-AP (androgen receptor antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



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 AffiniPure 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 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).