Recombinant Human Androgen Receptor protein ab82124

**Description**

**Product name**
Recombinant Human Androgen Receptor protein

**Purity**
> 95% SDS-PAGE. ab82124 is purified by an affinity chromatography in combination with FPLC.

**Expression system**
Escherichia coli

**Accession**
P10275-1

**Protein length**
Protein fragment

**Animal free**
No

**Nature**
Recombinant

**Species**
Human

**Sequence**

```
TSPTEETQKLTVSHIEGECQPIFLNVLEAIEPGVVCA
GDNNQPDSFA
ALLSSLNELGERQLVHVVKWAKALPGFRNLHVDDQM
AVIQYSWMGLMVFA
MGWRSFTNVNSRMLYFAPDLVNEYRMIHKSRMYSQC
VRMRHLSQEFGLWQL
ITPQEFLCMKALLLSFIPvDGLKNQKFFDELRMNY1KEL
DRIACKRK
PTSCSRFFYQLTKLLDSVQPIARELHQFTFDLLIKSHMV
SVDFPEMMAEIISVQVPKILSGKVKP¥YHTQ
```

**Predicted molecular weight**
34 kDa including tags

**Amino acids**
650 to 920

**Additional sequence information**
His tagged. NM_000044.

**Description**
Recombinant Human Androgen Receptor protein (His tag)

**Specifications**

Our **Abpromise guarantee** covers the use of ab82124 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

**Applications**
- SDS-PAGE
- EMSA
**Form**

Liquid

---

**Preparation and Storage**

**Stability and Storage**

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 8.00

Constituents: 0.75% Potassium chloride, 0.0154% DTT, 0.316% Tris HCl, 0.00584% EDTA, 20% Glycerol

---

**General Info**

**Function**

Steroid hormone receptors are ligand-activated transcription factors that regulate eukaryotic gene expression and affect cellular proliferation and differentiation in target tissues. Transcription factor activity is modulated by bound coactivator and corepressor proteins. Transcription activation is down-regulated by NR0B2. Activated, but not phosphorylated, by HIPK3 and ZIPK/DAPK3. Isoform 3 and isoform 4 lack the C-terminal ligand-binding domain and may therefore constitutively activate the transcription of a specific set of genes independently of steroid hormones.

**Tissue specificity**

Isoform 2 is mainly expressed in heart and skeletal muscle (PubMed:15634333). Isoform 3 is expressed by basal and stromal cells of prostate (at protein level) (PubMed:19244107).

**Involvement in disease**

Androgen insensitivity syndrome

Spinal and bulb muscular atrophy X-linked 1

Defects in AR may play a role in metastatic prostate cancer. The mutated receptor stimulates prostate growth and metastases development despite of androgen ablation. This treatment can reduce primary and metastatic lesions probably by inducing apoptosis of tumor cells when they express the wild-type receptor.

Androgen insensitivity, partial

**Sequence similarities**

Belongs to the nuclear hormone receptor family: NR3 subfamily.

Contains 1 nuclear receptor DNA-binding domain.

**Domain**

Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain. In the presence of bound steroid the ligand-binding domain interacts with the N-terminal modulating domain, and thereby activates AR transcription factor activity. Agonist binding is required for dimerization and binding to target DNA. The transcription factor activity of the complex formed by ligand-activated AR and DNA is modulated by interactions with coactivator and corepressor proteins. Interaction with RANBP9 is mediated by both the N-terminal domain and the DNA-binding domain. Interaction with EFCAB6/DJBP is mediated by the DNA-binding domain.

**Post-translational modifications**


Phosphorylated in prostate cancer cells in response to several growth factors including EGF. Phosphorylation is induced by c-Src kinase (CSK). Tyr-535 is one of the major phosphorylation sites and an increase in phosphorylation and Src kinase activity is associated with prostate cancer progression. Phosphorylation by TNK2 enhances the DNA-binding and transcriptional activity and may be responsible for androgen-independent progression of prostate cancer.

Phosphorylation at Ser-83 by CDK9 regulates AR promoter selectivity and cell growth.

Phosphorylation by PAK6 leads to AR-mediated transcription inhibition.

Palmitoylated by ZDHHC7 and ZDHHC21. Palmitoylation is required for plasma membrane...
targeting and for rapid intracellular signaling via ERK and AKT kinases and cAMP generation.

**Cellular localization**

Nucleus. Cytoplasm. Predominantly cytoplasmic in unligated form but translocates to the nucleus upon ligand-binding. Can also translocate to the nucleus in unligated form in the presence of RACK1.

**Please note:** All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

**Our Abpromise to you: Quality guaranteed and expert technical support**

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit [https://www.abcam.com/abpromise](https://www.abcam.com/abpromise) or contact our technical team.

**Terms and conditions**

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors