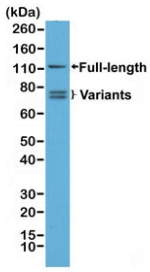
Androgen Receptor Antibody N-Terminal / AR N-Terminal Antibody [clone RM254] (R20274)

Catalog No.	Formulation	Size
R20274-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

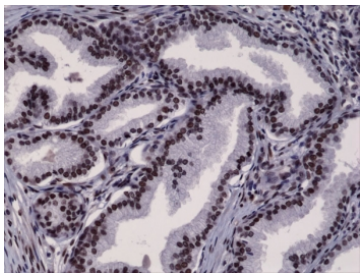
Recombinant RABBIT MONOCLONAL

Bulk quote request

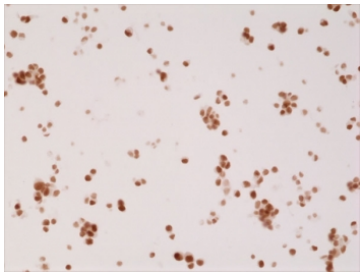
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM254
Purity	Protein A purified from animal origin-free supernatant
UniProt	P10275
Gene ID	367
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry/ICC (FFPE) : 1:1000-1:2500 (1) Western Blot : 1:100-1:1000
Limitations	This Androgen Receptor antibody is available for research use only.



Androgen Receptor Antibody N-Terminal (clone RM254) detects androgen receptor protein in western blot analysis of human 22Rv1 cell lysate. A prominent band corresponding to the full-length androgen receptor is observed at approximately 110 kDa, while additional lower molecular weight bands represent AR splice variants that retain the N-terminal transactivation domain. Because this antibody targets the N-terminal region of AR, it recognizes both the intact receptor and truncated variant isoforms lacking the C-terminal ligand-binding domain.



IHC testing of FFPE human prostate cancer tissue with recombinant Androgen Receptor antibody at 1:2500.



ICC testing of FFPE human 22RV1 cells (prostate carcinoma) with recombinant Androgen Receptor antibody at 1:2500.

Description

Androgen receptor (AR), encoded by the AR gene and also known as nuclear receptor subfamily 3 group C member 4 (NR3C4), is a ligand-regulated transcription factor that mediates cellular responses to androgens such as testosterone and dihydrotestosterone. The receptor is composed of several functional regions including a large N-terminal transactivation domain, a central DNA-binding domain, and a C-terminal ligand-binding domain. Androgen Receptor Antibody N-Terminal (clone RM254) recognizes an epitope within the N-terminal region of AR, allowing detection of androgen receptor proteins that contain the transcriptional activation domain.

The N-terminal domain of androgen receptor plays a critical role in transcriptional regulation because it contains the activation function-1 region responsible for recruitment of transcriptional coactivators and assembly of transcriptional complexes. This region is also the largest and most structurally flexible portion of the receptor, enabling interactions with multiple regulatory proteins involved in androgen-responsive gene expression. Antibodies targeting the N-terminal domain therefore detect AR proteins that retain the transcriptional regulatory portion of the receptor.

Detection of the AR N-terminal region is particularly important in studies of androgen receptor splice variants. In many biological contexts, especially prostate cancer, truncated AR isoforms lacking the C-terminal ligand-binding domain can arise through alternative splicing or structural rearrangements of the AR gene. These truncated receptors often remain transcriptionally active because the N-terminal transactivation domain is preserved. As a result, antibodies directed against the AR N-terminal domain can detect both the full-length receptor and variant AR proteins that lack the C-terminal region.

In contrast, antibodies directed toward the C-terminal ligand-binding domain detect only the full-length androgen receptor. This difference makes N-terminal antibodies especially useful in research examining androgen receptor signaling mechanisms, receptor truncation events, and ligand-independent AR activity. Detection of both intact AR and variant receptors provides valuable information about androgen signaling pathways and receptor biology.

Western blot experiments frequently reveal multiple androgen receptor species when N-terminal antibodies are used. The full-length receptor typically migrates near 110 kDa, while truncated AR variants may appear as lower molecular weight bands depending on the specific splice form present. These variant proteins can remain constitutively active and contribute to androgen signaling even in the absence of ligand binding.

Androgen Receptor Antibody N-Terminal (clone RM254) is a recombinant rabbit monoclonal antibody developed to recognize the N-terminal domain of androgen receptor. By targeting this region, the antibody enables detection of both full-length AR and N-terminal containing AR variant proteins, supporting research focused on androgen receptor signaling,

splice variant biology, and molecular mechanisms of androgen-responsive gene regulation.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Androgen Receptor Antibody N-Terminal may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE sections.

Immunogen

A peptide corresponding to the N-terminus of Androgen Receptor was used as the immunogen for this recombinant Androgen Receptor antibody.

Storage

Store the Androgen Receptor antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Androgen receptor N-terminal antibody, AR N-terminal domain antibody, NR3C4 N-terminal antibody, Androgen receptor transcription activation domain antibody