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#68492

# Androgen Receptor (AR-V7 Specific) Antibody



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Entrez-Gene ID #367  
UniProt ID #P10275-3

New 05/17

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W Endogenous	Species Cross-Reactivity H	Molecular Wt. 80 kDa	Source Rabbit*
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**Background:** Androgen receptor (AR), a zinc finger transcription factor belonging to the nuclear receptor superfamily, is activated by phosphorylation and dimerization upon ligand binding (1). This promotes nuclear localization and binding of AR to androgen response elements in androgen target genes. Research studies have shown that AR plays a crucial role in several stages of male development and the progression of prostate cancer (2,3).

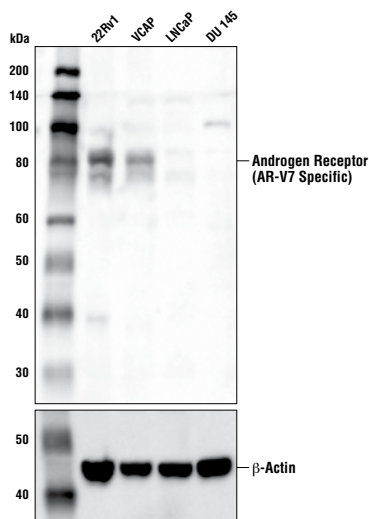
The AR3 or AR-V7 isoform, which lacks the typical ligand binding domain, is created through the alternative splicing of cryptic exons (4-5). AR-V7 is frequently expressed in castration-resistant prostate cancer (CRPC) and while dependent on the activity of the full-length androgen receptor (AR-FL), AR-V7 can activate a completely distinct transcriptional program (6-8). While enzalutamide and abiraterone have been beneficial in treating CRPC through the ligand binding domain of AR-FL, resistance in patients has been shown to be associated with AR-V7 detection in circulating tumor cells (9-12). Studies probing into mechanisms of overcoming this resistance are currently being explored and may help in stratifying patient populations for more personalized therapies (13-15).

#### Background References:

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- (2) Avila, D.M. et al. (2001) *J. Steroid. Biochem. Mol. Biol.* 76, 135-142.
- (3) Montgomery, J.S. et al. (2001) *J. Pathol.* 195, 138-146.
- (4) Hu, R. et al. (2009) *Cancer Res* 69, 16-22.
- (5) Guo, Z. et al. (2009) *Cancer Res* 69, 2305-13.
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- (7) Sun, S. et al. (2010) *J Clin Invest* 120, 2715-30.
- (8) Hu, R. et al. (2012) *Cancer Res* 72, 3457-62.
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- (11) Ryan, C.J. et al. (2013) *N Engl J Med* 368, 138-48.
- (12) Antonarakis, E.S. et al. (2014) *N Engl J Med* 371, 1028-38.
- (13) Liu, C. et al. (2014) *Clin Cancer Res* 20, 3198-210.
- (14) Sarwar, M. et al. (2016) *Oncotarget* 7, 63065-63081.
- (15) Ku, S.Y. et al. (2017) *Science* 355, 78-83.

**Specificity/Sensitivity:** Androgen Receptor (AR-V7 Specific) Antibody recognizes endogenous levels of total AR-V7 protein. This antibody does not cross-react with full-length AR protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu639 of human androgen receptor (V7 isoform) protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using Androgen Receptor (AR-V7 Specific) Antibody (upper) and  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower). Signal corresponding to the androgen receptor V7 isoform is detected in 22Rv1 and VCAP cells (AR-V7-positive), but is not detected in LNCaP and DU 145 cells (AR-V7-negative), confirming specificity of the antibody.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

\*Anti-rabbit secondary antibodies must be used to detect this antibody.

#### Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com)

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% nonfat dry milk, 1X TBS, 0.1% Tween<sup>®</sup>20 at 4°C with gentle shaking, overnight.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.