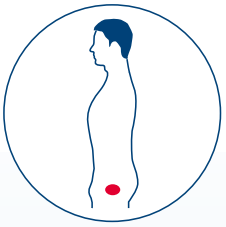
The power of a splice



In prostate cancer, researchers have a head start thanks to the discovery of a splice variant in the androgen receptor transcript (AR-V7) that is often linked to therapy resistance. Accurate detection of AR-V7 is essential to gain new insights into prostate cancer.

The new AdnaTest ProstateCancerPanel AR-V7 provides the following:

- Reliable and accurate molecular characterization of prostate circulating tumor cells (CTCs) for new insights into mechanisms
- Easy and fast process, without the need to invest in expensive instrumentation
- Accurate result interpretation with qRT-PCR
- Flexible detection of additional targets using your own primers

Sample to Insight

Get the highest CTC sensitivity and specificity

The AdnaTest ProstateCancerPanel AR-V7 is used for enrichment of CTCs from whole blood and subsequent molecular characterization by analyzing expression of AR-V7 and additional genes associated with prostate cancer. In spiking experiments, 2 tumor cells in 5 ml of whole blood are detected at a recovery rate of 95% (Table 1).

Table1. CTC enrichment using Prostate Select of the AdnaTest ProstateCancerPanel AR-V7

Samples	Samples in which cells were recovered	Recovery (%)
Two cells from the LnCap prostate cancer cell line were spiked into blood samples (5 ml) from healthy donors	38/40	95%

Linearity and efficiency of qRT-PCR

The qRT-PCR efficiency for each of the genes contained in the AdnaTest ProstateCancerPanel AR-V7 — prostate-specific antigen (PSA), prostate-specific membrane antigen (PSMA), wild type androgen receptor (AR-wt) and splice variant of the androgen receptor (AR-V7) — was confirmed with serial dilutions of standards (Figure 1). Resulting C_T values were linear and correlated to the copy number for each gene at each dilution, even at approximately 500 copies. The specificity of the AdnaTest ProstateCancerPanel AR-V7 is at least 93% (Table 2). The qRT-PCR efficiency of all tested prostate-cancer-related genes was higher than 90% and the corresponding amplification factors were above 1.9 (Table 3).

Table 2. Specificity using the AdnaTest ProstateCancerPanel AR-V7*

	PSA	PSMA	AR-wt	AR-V7
Cut off	35.00	35.00	35.00	35.00
Positives after cut off	0	0	1	0
Specificity	100%	100%	93%	100%

* Fourteen male healthy donors were analyzed with the AdnaTest ProstateCancerPanel AR-V7 using the given cut offs.

Table 3. qRT-PCR efficiency

	PSA	PSMA	AR-wt	AR-V7
Slope over the range	–3.55	–3.58	–3.56	–3.48
Efficiency ($1+10^{(-1/slope)}$)	91%	90%	91%	94%
Amplification factor ($10^{(1/-slope)}$)	1.91	1.90	1.91	1.94

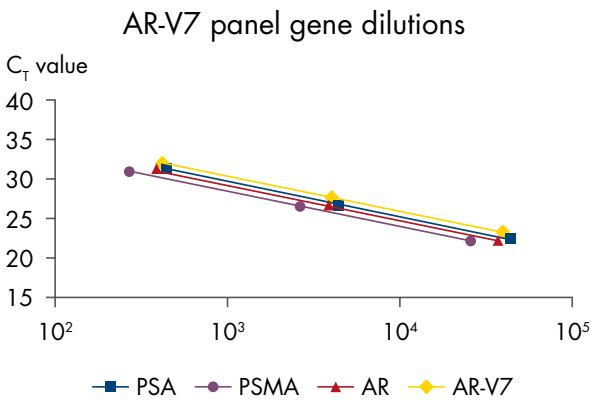


Figure 1. Gene dilutions using the AdnaTest ProstateCancerPanel AR-V7.

Ordering Information

Product	Contents	Cat. no.
AdnaTest ProstateCancerPanel AR-V7	For 12 enrichments of tumor cells from whole blood and subsequent detection of prostate cancer-associated gene expression including AR-V7 expression.	396132