

## Transcript levels of aldo-keto reductase family 1, subfamily C (AKR1C) are increased in prostate tissue of patients with type 2 diabetes

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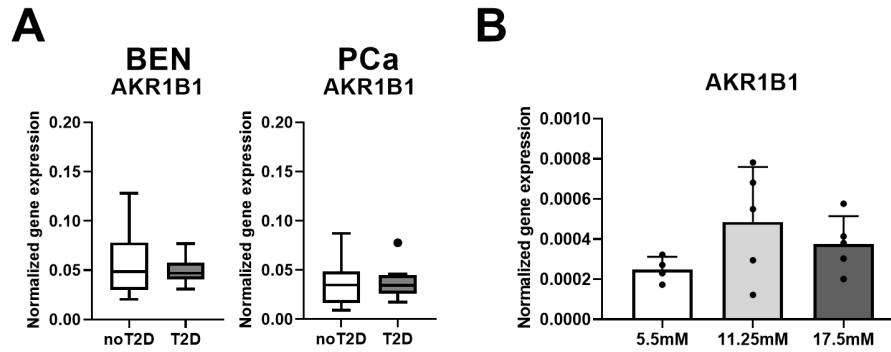
### Supplementary Materials

**Table S1.** Patient characteristics. Statistical significance was calculated among BEN, noT2D vs BEN, T2D as well as PCa, noT2D vs PCa, T2D samples using Mann-Whitney tests. Statistical significance was considered as  $p < 0.05$ . BMI: body mass index; n: number of patients; BEN: benign prostate tissue; PCa: prostate cancer tissue.

Parameter	BEN, noT2D mean $\pm$ SD	BEN, T2D mean $\pm$ SD	BEN p-value	PCa, noT2D mean $\pm$ SD	PCa, T2D mean $\pm$ SD	PCa p-value
Age [year]	67 $\pm$ 5	63 $\pm$ 6	0.0765	65 $\pm$ 8	64 $\pm$ 3	0.7352
BMI [kg/m <sup>2</sup> ]	27.6 $\pm$ 3.3	29.5 $\pm$ 4.9	0.3940	26.5 $\pm$ 3.2	28.9 $\pm$ 3.8	0.1879
Gleason 7a	-	-	-	7	7	-
Gleason 7b	-	-	-	4	4	-
n	17	17	-	11	11	-

**Table S2.** Relative gene expression levels were measured in benign (BEN) prostate and prostate cancer (PCa) tissues of patients with (T2D) or without (noT2D) type 2 diabetes. Statistical significance was calculated among BEN, noT2D vs BEN, T2D as well as PCa, noT2D vs PCa, T2D samples using Mann-Whitney tests. Significant differences are shown in bold, non-significant differences are indicated in italic. Statistical significance was considered as  $p < 0.05$ .

Pathway	Gene	BEN, noT2D mean $\pm$ SD	BEN, T2D mean $\pm$ SD	BEN p-value	PCa, noT2D mean $\pm$ SD	PCa, T2D mean $\pm$ SD	PCa p-value
HIF1 $\alpha$	<i>ANGPTL4</i>	<i>0.0152 <math>\pm</math> 0.0164</i>	<i>0.0146 <math>\pm</math> 0.0099</i>	<i>0.4332</i>	<i>0.0078 <math>\pm</math> 0.0065</i>	<i>0.0100 <math>\pm</math> 0.0101</i>	<i>0.8470</i>
	<i>GLUT1</i>	<i>0.0925 <math>\pm</math> 0.0519</i>	<i>0.0932 <math>\pm</math> 0.0557</i>	<i>1.0000</i>	<i>0.0842 <math>\pm</math> 0.0327</i>	<i>0.0853 <math>\pm</math> 0.0308</i>	<i>0.9873</i>
	<b>HIF1<math>\alpha</math></b>	<b>0.6066 <math>\pm</math> 0.2650</b>	<b>0.7629 <math>\pm</math> 0.3382</b>	<b>0.0730</b>	<b>0.8476 <math>\pm</math> 0.2779</b>	<b>0.8516 <math>\pm</math> 0.5967</b>	<b>0.1713</b>
NF $\kappa$ B	<i>BIRC5</i>	<i>0.0016 <math>\pm</math> 0.0012</i>	<i>0.0013 <math>\pm</math> 0.0010</i>	<i>0.6339</i>	<i>0.0036 <math>\pm</math> 0.0020</i>	<i>0.0036 <math>\pm</math> 0.0030</i>	<i>0.6994</i>
	<i>GPX2</i>	<i>0.0220 <math>\pm</math> 0.0298</i>	<i>0.0139 <math>\pm</math> 0.0101</i>	<i>0.7273</i>	<i>0.0091 <math>\pm</math> 0.0110</i>	<i>0.0100 <math>\pm</math> 0.0094</i>	<i>0.5190</i>
	<i>NOS2</i>	<i>0.0014 <math>\pm</math> 0.0015</i>	<i>0.0032 <math>\pm</math> 0.0047</i>	<i>0.1270</i>	<i>0.0212 <math>\pm</math> 0.0563</i>	<i>0.0014 <math>\pm</math> 0.0014</i>	<i>0.5943</i>
	<b>RELA</b>	<b>0.2805 <math>\pm</math> 0.1127</b>	<b>0.3498 <math>\pm</math> 0.1109</b>	<b>0.0232</b>	<b>0.3421 <math>\pm</math> 0.1221</b>	<b>0.3573 <math>\pm</math> 0.0509</b>	<b>0.9487</b>
	<i>SOCS2</i>	<i>0.0100 <math>\pm</math> 0.0078</i>	<i>0.0065 <math>\pm</math> 0.0056</i>	<i>0.2415</i>	<i>0.0069 <math>\pm</math> 0.0083</i>	<i>0.0051 <math>\pm</math> 0.0049</i>	<i>0.8977</i>
proli-feration	<i>MKI67</i>	<i>0.0146 <math>\pm</math> 0.0122</i>	<i>0.0099 <math>\pm</math> 0.0066</i>	<i>0.1932</i>	<i>0.0171 <math>\pm</math> 0.0079</i>	<i>0.0281 <math>\pm</math> 0.0228</i>	<i>0.3653</i>
	<b>PCNA</b>	<b>0.1108 <math>\pm</math> 0.0574</b>	<b>0.0978 <math>\pm</math> 0.0540</b>	<b>0.1932</b>	<b>0.0939 <math>\pm</math> 0.0255</b>	<b>0.1155 <math>\pm</math> 0.0259</b>	<b>0.0192</b>



**Figure S1.**

**A** Gene expression of *AKR1B1* was measured in benign (BEN) prostate (n=17-17) and prostate cancer (PCa) (n=11-11) tissues of patients with (T2D) or without (noT2D) type 2 diabetes. Data are shown as Tukey box plots. Statistical significance was calculated among BEN, noT2D vs BEN, T2D as well as PCa, noT2D vs PCa, T2D samples using Mann-Whitney tests. **B** Gene expression of *AKR1B1* was measured in 5.5-, 11.25- and 17.5 mM glucose treated PC3 cells (n=5 independent experiments). Statistical significance was calculated using paired Friedman test with Dunn's multiple comparison. Statistical significance was considered as  $p < 0.05$ .