

Table S2.

The in silico mean mRNA expression of central AA pathway genes in prostate cancer, healthy prostate and all available normal tissues combined.

Fold change and the significance (p-value) of the expression level difference between prostate cancer and normal prostate or prostate cancer and all normal tissues <sup>a</sup> indicated.

Gene		ensg_id	Tissue	normal n	cancer n	normal mean	cancer mean	fold change (FC)	p-value
PAFAH1B1	Platelet-activating factor acetylhydrolase IB subunit alpha	ENSG00000007168	prca vs. all normals	1502	329	963,4521318	614,0557872	0,637349555	<b>9,38E-94</b>
<b>PLA2G2A</b>	Phospholipase A2, group IIA	ENSG00000188257	prca vs. all normals	1502	329	1038,238703	5105,726778	<b>4,917681033</b>	<b>3,09E-55</b>
<b>EPHX2</b>	Epoxide hydrolase 2	ENSG00000120915	prca vs. all normals	1502	329	312,0897525	840,7379292	<b>2,693897901</b>	<b>4,09E-53</b>
<b>FAAH</b>	Fatty acid amide hydrolase	ENSG00000117480	prca vs. all normals	1502	329	447,845267	794,7888523	<b>1,774695215</b>	<b>1,45E-51</b>
<b>PLA2G7</b>	Phospholipase A2, group VII	ENSG00000146070	prca vs. all normals	1502	329	147,0058053	579,8321125	<b>3,944280372</b>	<b>9,15E-45</b>
<b>ALOX15B</b>	15-lipoxygenase 2	ENSG00000179593	prca vs. all normals	1502	329	257,9321661	819,2249897	<b>3,176125731</b>	<b>6,83E-38</b>
PNPLA3	Patatin-like phospholipase domain containing 3	ENSG00000100344	prca vs. all normals	1208	66	116,7193797	49,59731364	0,424927838	<b>2,56E-26</b>
ALOX5	5-lipoxygenase	ENSG00000012779	prca vs. all normals	1502	329	452,1764998	276,056972	0,610507119	<b>2,79E-21</b>
PLA2G4B	Phospholipase A2, group IVB	ENSG00000168970	prca vs. all normals	1084	66	716,9442629	527,9614697	0,736405181	<b>4,76E-20</b>
PLA2G4C	Phospholipase A2, group IVC	ENSG00000105499	prca vs. all normals	1502	329	635,0591036	467,1265711	0,735563932	<b>4,66E-19</b>
PLA2G6	Phospholipase A2, group VII	ENSG00000184381	prca vs. all normals	1502	329	401,8848187	302,4725562	0,75263494	<b>5,36E-18</b>
PAFAH1B2	Platelet-activating factor acetylhydrolase IB subunit beta	ENSG00000168092	prca vs. all normals	1084	66	230,9484679	131,3437591	0,568714572	<b>4,68E-15</b>
ALOX12	12-lipoxygenase	ENSG00000108839	prca vs. all normals	1502	329	198,782033	142,4496012	0,716612055	<b>7,92E-14</b>
PLA2G10	Phospholipase A2, group X	ENSG00000069764	prca vs. all normals	1502	329	197,1856985	122,1837418	0,619637949	<b>1,37E-13</b>
PTGS2	Prostaglandin-endoperoxide synthase 2 (COX-2)	ENSG00000073756	prca vs. all normals	1502	329	265,6504865	469,7278997	1,768217728	<b>5,13E-13</b>
PLA2G4A	Phospholipase A2, group IVA	ENSG00000116711	prca vs. all normals	1502	329	143,5039978	189,817287	1,3227317	<b>3,84E-11</b>
CYP2J2	Cytochrome P450 2J2	ENSG00000134716	prca vs. all normals	1502	329	392,4997611	290,443979	0,73998511	<b>4,09E-11</b>
CYP2C9	Cytochrome P450 2C9	ENSG00000138109	prca vs. all normals	1502	329	281,6682194	215,4017207	0,764735621	<b>4,32E-09</b>
PTGES3	Prostaglandin E synthase 3	ENSG00000110958	prca vs. all normals	1502	329	3917,126327	4481,046143	1,143962632	<b>2,91E-08</b>
PAFAH2	Platelet-activating factor acetylhydrolase 2	ENSG00000158006	prca vs. all normals	1502	329	200,9277265	230,7900131	1,148622203	<b>5,39E-08</b>
ALOX15	15-lipoxygenase	ENSG00000161905	prca vs. all normals	1502	329	148,8578228	110,2872909	0,740890125	<b>1,40E-07</b>
PAFAH1B3	Platelet-activating factor acetylhydrolase IB subunit gamma	ENSG00000079462	prca vs. all normals	1502	329	435,3342514	512,7975246	1,177939762	<b>7,14E-07</b>
PTGES2	Prostaglandin E synthase 2	ENSG00000148334	prca vs. all normals	1084	66	398,926715	299,8239273	0,751576457	<b>8,40E-07</b>
CYP2C8	Cytochrome P450 2C8	ENSG00000138115	prca vs. all normals	1502	329	112,5615253	93,56197863	0,831207452	<b>4,14E-06</b>
PLA2G4F	Phospholipase A2, group IVF	ENSG00000168907	prca vs. all normals	621	66	291,3947895	389,9707879	1,338290189	<b>4,93E-06</b>
<b>CYP4F8</b>	Cytochrome P450 4F8	ENSG00000186526	prca vs. all normals	1084	66	41,17989734	111,2718733	<b>2,702092052</b>	<b>9,53E-05</b>
ANXA2	Annexin A2	ENSG00000182718	prca vs. all normals	1502	329	2572,604676	2159,868897	0,83956502	<b>0,00013324</b>
<b>HPGD</b>	Hydroxyprostaglandin dehydrogenase 15-(NAD)	ENSG00000164120	prca vs. all normals	1502	329	309,1000532	460,3100726	1,489194414	<b>0,0002267</b>
PLA2G3	Phospholipase A2, group III	ENSG00000100078	prca vs. all normals	1084	66	86,20494308	66,58203485	0,772369106	0,00440832
PNPLA8	Patatin-like phospholipase domain containing 8	ENSG00000135241	prca vs. all normals	621	66	1539,682947	1435,238485	0,932164955	0,01749796
ANXA1	Annexin A1	ENSG00000135046	prca vs. all normals	1502	329	2359,575591	2158,634509	0,914840159	0,05191733
PTGES	Prostaglandin E synthase	ENSG00000148344	prca vs. all normals	1502	329	299,3406136	278,0709301	0,928944879	0,07034606
PNPLA4	Patatin-like phospholipase domain containing 4	ENSG00000006757	prca vs. all normals	1502	329	248,6895535	259,6085319	1,04390606	0,11949377
ALOX12B	12R-lipoxygenase	ENSG00000179477	prca vs. all normals	1502	329	103,1881562	98,61502888	0,955681665	0,24769254
PTGS1	Prostaglandin-endoperoxide synthase 1 (COX-1)	ENSG00000095303	prca vs. all normals	1626	329	470,6322307	450,635055	0,957509974	0,38400801
PLA2G2D	Phospholipase A2, group IID	ENSG00000117215	prca vs. all normals	1084	66	60,88093155	73,46130303	1,206638945	0,68394746

Gene		ensg_id	Tissue	normal n	cancer n	normal mean	cancer mean	fold change (FC)	p-value
<b>HPGD</b>	Hydroxyprostaglandin dehydrogenase 15-(NAD)	ENSG00000164120	prca vs. normal prostate	147	329	216,5379782	460,3100726	<b>2,125770622</b>	<b>2,16E-09</b>
<b>PLA2G7</b>	Phospholipase A2, group VII	ENSG00000146070	prca vs. normal prostate	147	329	299,968202	579,8321125	1,932978591	<b>3,76E-14</b>
PLA2G2D	Phospholipase A2, group IID	ENSG00000117215	prca vs. normal prostate	12	66	43,03673333	73,46130303	1,706944216	0,32826298
PAFAH1B3	Platelet-activating factor acetylhydrolase IB subunit gamma	ENSG00000079462	prca vs. normal prostate	147	329	382,2204626	512,7975246	1,341627607	<b>1,62E-09</b>
<b>PLA2G2A</b>	Phospholipase A2, group IIA	ENSG00000188257	prca vs. normal prostate	147	329	3956,239864	5105,726778	1,290550359	<b>0,00088234</b>

CYP2J2	Cytochrome P450 2J2	ENSG00000134716	prca vs. normal prostate	147	329	232,9184347	290,443979	1,246977206	0,00029555
<b>FAAH</b>	Fatty acid amide hydrolase	ENSG00000117480	prca vs. normal prostate	147	329	641,3767068	794,7888523	1,23919195	3,67E-05
PTGES3	Prostaglandin E synthase 3	ENSG00000110958	prca vs. normal prostate	147	329	3637,354041	4481,046143	1,231952153	5,57E-06
CYP2C9	Cytochrome P450 2C9	ENSG00000138109	prca vs. normal prostate	147	329	175,0565932	215,4017207	1,230469054	0,02050814
ALOX5	5-lipoxygenase	ENSG00000012779	prca vs. normal prostate	147	329	246,9453347	276,056972	1,11788697	0,01345451
PAFAH2	Platelet-activating factor acetylhydrolase 2	ENSG00000158006	prca vs. normal prostate	147	329	215,3590218	230,7900131	1,071652402	0,10127299
PTGES	Prostaglandin E synthase	ENSG00000148344	prca vs. normal prostate	147	329	261,3029075	278,0709301	1,064170823	0,38204557
<b>EPHX2</b>	Epoxide hydrolase 2	ENSG00000120915	prca vs. normal prostate	147	329	795,8684245	840,7379292	1,056378044	0,37781672
PNPLA3	Patatin-like phospholipase domain containing 3	ENSG00000100344	prca vs. normal prostate	12	66	48,42291667	49,59731364	1,024252917	0,86174049
PTGES2	Prostaglandin E synthase 2	ENSG00000148334	prca vs. normal prostate	12	66	295,59875	299,8239273	1,014293624	0,92514247
<b>ALOX15B</b>	15-lipoxygenase 2	ENSG00000179593	prca vs. normal prostate	147	329	815,6447497	819,2249897	1,00438946	0,95730338
PNPLA8	Patatin-like phospholipase domain containing 8	ENSG00000135241	prca vs. normal prostate	9	66	1460,275556	1435,238485	0,982854557	0,76547133
PNPLA4	Patatin-like phospholipase domain containing 4	ENSG00000006757	prca vs. normal prostate	147	329	265,4512558	259,6085319	0,977989466	0,55049625
PLA2G4C	Phospholipase A2, group IVC	ENSG00000105499	prca vs. normal prostate	147	329	502,9571633	467,1265711	0,928760151	0,10803146
ANXA1	Annexin A1	ENSG00000135046	prca vs. normal prostate	147	329	2334,960484	2158,634509	0,924484386	0,20387119
PLA2G4F	Phospholipase A2, group IVF	ENSG00000168907	prca vs. normal prostate	9	66	422,0002222	389,9707879	0,924100906	0,69370368
PLA2G6	Phospholipase A2, group VII	ENSG00000184381	prca vs. normal prostate	147	329	327,8385497	302,4725562	0,922626569	0,15351603
PLA2G4A	Phospholipase A2, group IVA	ENSG00000116711	prca vs. normal prostate	147	329	205,983368	189,817287	0,921517542	0,1585713
CYP2C8	Cytochrome P450 2C8	ENSG00000138115	prca vs. normal prostate	147	329	101,697997	93,56197863	0,919998244	0,2815231
ALOX12B	12R-lipoxygenase	ENSG00000179477	prca vs. normal prostate	147	329	112,0283959	98,61502888	0,88026815	0,06229286
ALOX15	15-lipoxygenase	ENSG00000161905	prca vs. normal prostate	147	329	127,9557207	110,2872909	0,861917625	0,11825445
PAFAH1B1	Platelet-activating factor acetylhydrolase IB subunit alpha	ENSG00000007168	prca vs. normal prostate	147	329	739,1739184	614,0557872	0,830732487	2,25E-07
PAFAH1B2	Platelet-activating factor acetylhydrolase IB subunit beta	ENSG00000168092	prca vs. normal prostate	12	66	163,0041833	131,3437591	0,805769253	0,53350665
PTGS2	Prostaglandin-endoperoxide synthase 2 (COX-2)	ENSG00000073756	prca vs. normal prostate	147	329	588,178417	469,7278997	0,798614648	0,01204872
PLA2G10	Phospholipase A2, group X	ENSG00000069764	prca vs. normal prostate	147	329	159,4249556	122,1837418	0,766402859	0,08638945
ANXA2	Annexin A2	ENSG00000182718	prca vs. normal prostate	147	329	2843,449163	2159,868897	0,759594694	0,00021643
ALOX12	12-lipoxygenase	ENSG00000108839	prca vs. normal prostate	147	329	200,8647497	142,4496012	0,709181683	0,00015034
PLA2G3	Phospholipase A2, group III	ENSG00000100078	prca vs. normal prostate	12	66	96,49910833	66,58203485	0,689975648	0,18602342
PLA2G4B	Phospholipase A2, group IVB	ENSG00000168970	prca vs. normal prostate	12	66	780,6333333	527,9614697	0,676324527	0,0337856
PTGS1	Prostaglandin-endoperoxide synthase 1 (COX-1)	ENSG00000095303	prca vs. normal prostate	147	329	699,3113272	450,635055	0,644398335	1,67E-07
<b>CYP4F8</b>	Cytochrome P450 4F8	ENSG00000186526	prca vs. normal prostate	12	66	232,3133	111,2718733	0,478973323	0,04537248

<sup>a</sup> All normal tissues <sup>24</sup>: adipose tissue, adult stem cell, bladder, blood lymphoid cell, blood myeloid cell, blood unspecified leukocyte, blood vessel, bone, bone marrow, bone marrow lymphoid cell, bone marrow myeloid cell, breast, central nervous system, cervix, circulating reticulocyte, colorectal, endocrine system, eye, gum, hair follicle, heart, hematopoietic stem cell, kidney, liver, liver and biliary system, lymphatic system, mesenchymal stem cell, mesothelium, muscle, other GI system, other urogenital system, ovary, pancreas, peripheral nervous system, placenta, prostate, respiratory system, salivary gland, skin, testis, tongue, uterus, whole blood.