

Identification of the Major Prostaglandin Glycerol Ester Hydrolase in Human Cancer Cells\*

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\*Running title: *Identification of prostaglandin glycerol ester hydrolase*

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## **Supplemental Information**

Identification of prostaglandin glycerol ester hydrolase

Activity (ng PGE <sub>2</sub> /μg protein)	LNCaP	MCF7	231MFP	PC3
<b>Hydrolytic Activity</b>	<b>34</b>	<b>52</b>	<b>65</b>	<b>70</b>
<b>Serine Hydrolases (Spectral Counting)</b>	<b>LNCaP</b>	<b>MCF7</b>	<b>231MFP</b>	<b>PC3</b>
FASN Fatty acid synthase	1850	425	348	1324
<b>MGLL monoglyceride lipase</b>	11	7	37	54
FAAH2 Fatty-acid amide hydrolase 2	6	0	0	0
PREP prolyl endopeptidase	455	407	312	423
KIAA1363 (AADACL1 arylacetamide deacetylase-like 1)	58	1	26	373
APEH Acylamino-acid-releasing enzyme	571	145	165	642
PAFAH1B2 Platelet-activating factor acetylhydrolase IB subunit beta	19	84	105	22
PAFAH1B3 Platelet-activating factor acetylhydrolase IB subunit gamma	72	165	154	0
PAFAH2 Platelet-activating factor acetylhydrolase 2, cytoplasmic	19	9	5	22
ABHD2 Abhydrolase domain-containing protein 2	22	0	0	0
ABHD3 Abhydrolase domain-containing protein 3	2	0	0	7
ABHD4 Abhydrolase domain-containing protein 4	27	0	0	5
ABHD6 Abhydrolase domain-containing protein 6	55	0	1	62
ABHD10 Abhydrolase domain-containing protein 10	622	112	274	534
ABHD11 Abhydrolase domain-containing protein 11	258	169	64	136
ABHD12 Abhydrolase domain-containing protein 12	109	0	1	107
ABHD13 Abhydrolase domain-containing protein 13	2	0	0	1
LYPLA1 Acyl-protein thioesterase 1	81	92	42	21
<b>LYPLA2 Acyl-protein thioesterase 2</b>	31	95	97	138
LYPLAL1 Lysophospholipase-like protein 1	73	44	40	25
DPP4 Dipeptidyl peptidase 4	38	0	0	89
DPP7 similar to Dipeptidyl-peptidase 2	170	3	1	14
DPP8 Dipeptidyl peptidase 8	9	15	12	16
DPP9 Dipeptidyl peptidase 9	50	57	84	445
<b>CES1 Liver carboxylesterase 1</b>	0	0	0	0
CES2 carboxylesterase 2	18	11	12	8
CES3 esterase 3	2	0	0	0
<b>PPT1 Palmitoyl-protein thioesterase 1</b>	1	0	0	0
PPT2 palmitoyl-protein thioesterase 2	3	4	21	22
PRCP prolylcarboxypeptidase isoform 2 preproprotein	77	25	19	49
PREPL prolyl endopeptidase-like isoform C	63	33	30	98
RBBP9 Retinoblastoma-binding protein 9	9	23	29	10
PNPLA8 Patatin-like phospholipase domain-containing protein 8	15	0	0	11
PNPLA6 Neuropathy target esterase	46	0	1	211
PNPLA4 Patatin-like phospholipase domain-containing protein 4	49	3	6	42
SIAE Sialate O-acetyltransferase	94	19	26	10
CTSA cathepsin A precursor	12	25	11	8
PPME1 Protein phosphatase methylesterase 1	63	20	17	48
Abhydrolase domain-containing protein FAM108A1	7	0	0	8
Abhydrolase domain-containing protein FAM108B1	12	0	0	31
PARL Presenilins-associated rhomboid-like protein	8	0	0	8
CPVL Probable serine carboxypeptidase	0	0	7	27
DAGLB Sn1-specific diacylglycerol lipase beta	6	0	0	20
PLAT Tissue-type plasminogen activator precursor	0	0	1	9
LIPA, highly similar to lysosomal acid lipase/cholesteryl ester hydrolase	0	0	5	0
HTRA1 Serine protease HTRA1	0	0	0	0
PGAP1 GPI inositol-deacylase	0	0	0	2
SCPEP Retinoid-inducible serine carboxypeptidase	121	0	0	47
PLAU urokinase plasminogen activator	0	0	0	1
PLA2G4A Cytosolic phospholipase A2	0	0	0	1
IAH1 Isoamyl acetate-hydrolyzing esterase 1	2	6	5	5
QRSL1 Glutaminyl-tRNA synthase-like protein 1	1	1	1	0
BCHE Cholinesterase precursor	10	0	0	0
BAT5	28	0	0	20
LACTB	2	0	0	2

**Supplemental Data 1.** Activity-based protein profiling, multidimensional protein identification technology (ABPP-MuDPIT) analysis of serine hydrolases in human cancer cell lines (31, 32). PGE<sub>2</sub>-G hydrolase activity was compared to known serine hydrolase inventories.