Int J Clin Exp Pathol (2009) 2, 463-475
www.ijcep.com/IJCEP812004

Supplemental Table 1 Fold change in vesicle trafficking gene expression after 48 hours treatment with 10^{-9}M E2 in EFF-3, EFM-19 and MCF-7 breast cancer cell lines detected by Affymetrix GeneChips

Probe set	Gene name	Symbol	mRNA Fold Change					
			EFF-3		EFM-19		MCF-7	
203504_s_at	ATP-binding cassette, sub-family A (ABC1), member 1	ABCA1		NC	2.83	D		NC
204567_s_at	ATP-binding cassette, sub-family G (WHITE), member 1	ABCG1		NC	2.15	D	5.28	D
226694_at	A kinase (PRKA) anchor protein 2	AKAP2		NC	2.64	D	3.25	D
204289_at	Aldehyde dehydrogenase 6 family, member A1	ALDH6A1		NC		NC		NC
243667_at	AP1 gamma subunit binding protein 1	AP1GBP1		NC	2.64	D		NC
216689_x_at	Rho GTPase activating protein 1	ARHGAP1		NC		NC	2.15	D
204492_at	Rho GTPase activating protein 11A	ARHGAP11A		NC		NC	3.74	I
225173_at	Rho GTPase activating protein 18	ARHGAP18		NC		NC	4.29	D
212738_at	Rho GTPase activating protein 19	ARHGAP19		NC		NC	2.83	I
226638_at	Rho GTPase activating protein 23	ARHGAP23		NC	2	D		NC
223422_s_at	Rho GTPase activating protein 24	ARHGAP24	1.87	D	2	D		NC
37117_at	Rho GTPase activating protein 8	ARHGAP8		NC	1.52	MD	2.47	D
201167_x_at	Rho GDP dissociation inhibitor (GDI) alpha	ARHGDIA		NC		NC	2	D
203586_s_at	ADP-ribosylation factor-like 4D	ARL4D		NC	2	D		NC
1559485_at	ATG2 autophagy related 2 homolog B (*S. cerevisiae*)	ATG2B		NC		NC	2.3	D
213036_x_at	ATPase, Ca++ transporting, ubiquitous	ATP2A3		NC	6.5	D	4.93	D
220197_at	ATPase, H+ transporting, lysosomal V0 subunit a4	ATP6V0A4	1.75	MD		NC	22.63	D
201971_s_at	ATPase, H+ transporting, lysosomal 70kDa, V1 subunit A	ATP6V1A	1.52	MD		NC	2.83	D
213106_at	ATPase, aminophospholipid transporter (APLT), class I, type 8A, member 1	ATP8A1	1.42	MD	2.3	MD	4	D
238034_at	Calnexin	CANX		NC	0	NC	2	I
208063_s_at	Calpain 9	CAPN9	1.52	MD	2	D		NC
226350_at	Choroideremia-like (Rab escort protein 2)	CHML		NC	1.15	I	3.25	I
203953_s_at	Claudin 3	CLDN3		NC	1.63	D	2.64	D
214635_at	Claudin 9	CLDN9		NC	2	D		NC
222409_at	Coronin, actin binding protein, 1C	CORO1C		NC	1.24	MI	2.64	I
205538_at	Coronin, actin binding protein, 2A	CORO2A		NC	2	D	2.15	D
233073_at	Cysteine-rich motor neuron 1	CRIM1		NC		NC	4.93	D
201280_s_at	Disabled homolog 2, mitogen-responsive phosphoprotein	DAB2	2.83	D		NC	9.85	D

	(Drosophila)							
222958_s_at	DEP domain containing 1	DEPDC1		NC	1.87	MI	6.5	I
1556607_at	EH-domain containing 4	EHD4		NC	2.15	D		NC
220318_at	Epsin 3	EPN3		NC	2	D	3.04	D
209962_at	Erythropoietin receptor	EPOR		NC		NC	2.47	D
222906_at	Feline leukemia virus subgroup C cellular receptor 1	FLVCR1		NC		NC	2.47	I
239453_at	Formin binding protein 1	FNBP1		NC		NC	2.47	D
242310_at	Formin binding protein 1-like	FNBP1L		NC	2.15	D		NC
235101_at	Formin binding protein 4	FNBP4		NC	1.52	MD	2	D
211795_s_at	FYN binding protein (FYB-120/130)	FYB	2	D		NC		NC
218204_s_at	FYVE and coiled-coil domain containing 1	FYCO1		NC		NC	2	D
231832_at	**UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 4 (GalNAc-T4)**	**GALNT4**	**2**	**I**	**2.15**	**I**	**2**	**I**
212256_at	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 10 (GalNAc-T10)	GALNT10		NC	2	D	2.64	D
222773_s_at	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12 (GalNAc-T12)	GALNT12		NC		NC	2.15	D
214190_x_at	Golgi associated, gamma adaptin ear containing, ARF binding protein 2	GGA2		NC		NC	2	D
217771_at	Golgi membrane protein 1	GOLM1	2.15	I		NC	2.47	I
208813_at	Glutamic-oxaloacetic transaminase 1, soluble (aspartate aminotransferase 1)	GOT1		NC		NC	2.3	I
241036_at	Hermansky-Pudlak syndrome 3	HPS3		NC		NC	2.47	D
209566_at	Insulin induced gene 2	INSIG2	2	D		NC		NC
211952_at	Importin 5	IPO5		NC	2	I	2	I
200992_at	Importin 7	IPO7		NC		NC	2.47	I
203710_at	Inositol 1,4,5-triphosphate receptor, type 1	ITPR1		NC	2.83	D	3.25	D
209680_s_at	Kinesin family member C1	KIFC1		NC		NC	2.47	I
201795_at	Lamin B receptor	LBR	1.42	MI	1.42	MI	4.93	I
208949_s_at	Lectin, galactoside-binding, soluble, 3	LGALS3		NC		NC	2	D
202193_at	LIM domain kinase 2	LIMK2		NC	2	D		NC
241652_x_at	Lin-7 homolog A (C. elegans)	LIN7A		NC		NC	2.64	D
219760_at	Lin-7 homolog B (C. elegans)	LIN7B		NC		NC	2.15	D
225897_at	Myristoylated alanine-rich protein kinase C substrate	MARCKS		NC	2.15	D		NC
229797_at	Mucolipin 3	MCOLN3		NC	2	D		NC
232682_at	Melanoregulin	MREG	2.15	I		NC	1.87	MI
201577_at	Non-metastatic cells 1, protein (NM23A) expressed in	NME1		NC	1.87	MI	2	I
223805_at	Oxysterol binding protein-like 6	OSBPL6		NC		NC	2.64	I

224658_x_at	Phosphofurin acidic cluster sorting protein 1	PACS1		NC		NC	2.15	D
1554640_at	Paralemmin 2	PALM2		NC	2.15	D		NC
202336_s_at	Peptidylglycine alpha-amidating monooxygenase	PAM		NC		NC	2.64	I
205380_at	**PDZ domain containing 1**	**PDZK1**	**12.13**	**I**	**2.15**	**I**	**24.26**	**I**
221604_s_at	Peroxisomal biogenesis factor 16	PEX16		NC		NC	2	D
239274_at	Phosphatidylinositol binding clathrin assembly protein	PICALM		NC		NC	2	D
214978_s_at	**Protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 4**	**PPFIA4**	**3.74**	**I**	**5.28**	**I**	**6.07**	**I**
201490_s_at	Peptidylprolyl isomerase F (cyclophilin F)	PPIF		NC	2.15	I		NC
1552797_s_at	Prominin 2	PROM2		NC	2	D	3.04	D
1552274_at	PX domain containing serine/threonine kinase	PXK		NC	2.47	I		NC
1552275_s_at	PX domain containing serine/threonine kinase	PXK		NC	3.04	I		NC
224210_s_at	Peroxisomal membrane protein 4, 24kDa	PXMP4	1.52	MD		NC	4	D
1556122_at	RAB11B, member RAS oncogene family	RAB11B		NC		NC	2.15	D
221810_at	RAB15, member RAS onocogene family	RAB15		NC	2.15	D	0	NC
229398_at	RAB18, member RAS oncogene family	RAB18		NC		NC	2.83	D
223463_at	RAB23, member RAS oncogene family	RAB23		NC		NC	2	I
219562_at	RAB26, member RAS oncogene family	RAB26		NC		NC	2	D
207017_at	**RAB27B, member RAS oncogene family**	**RAB27B**	**2**	**D**	**3.25**	**D**	**5.28**	**D**
217763_s_at	RAB31, member RAS oncogene family	RAB31		NC	2	D	4.6	I
219412_at	RAB38, member RAS oncogene family	RAB38	2.15	I	2.47	I		NC
230075_at	RAB39B, member RAS oncogene family	RAB39B		NC		NC	4	I
218700_s_at	RAB7, member RAS oncogene family-like 1	RAB7L1		NC		NC	2.15	D
206103_at	Ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3)	RAC3	3.04	I		NC		NC
222077_s_at	Rac GTPase activating protein 1	RACGAP1	1.42	MI	1.52	MI	2.3	I
227224_at	Ral GEF with PH domain and SH3 binding motif 2	RALGPS2		NC	1.63	MI	2	I
200749_at	RAN, member RAS oncogene family	RAN		NC		NC	2	I
244474_at	RAN binding protein 9	RANBP9		NC	2	D	1.63	MD
202362_at	RAP1A, member of RAS oncogene family	RAP1A		NC		NC	2.47	I
234344_at	RAP2C, member of RAS oncogene family	RAP2C	1.52	MI		NC	2.64	I
1553185_at	RAS and EF-hand domain containing	RASEF		NC		NC	3.74	D
230563_at	RasGEF domain family, member 1A	RASGEF1A		NC		NC	2.47	I
205590_at	RAS guanyl releasing protein 1 (calcium and DAG-regulated)	RASGRP1		NC		NC	9.19	I
244745_at	**RAS-like, estrogen-regulated, growth inhibitor**	**RERG**	**2**	**I**	**3.74**	**I**	**4.93**	**I**
213409_s_at	Ras homolog enriched in brain	RHEB		NC		NC	2.15	I
224044_at	Ras homolog gene family, member T1	RHOT1	16	I		NC	2.47	D

212646_at	Raftlin, lipid raft linker 1	RFTN1	1.75	MD	3.49	D		NC
1554004_a_at	Rho-guanine nucleotide exchange factor	RGNEF		NC	19.7	I		NC
202976_s_at	Rho-related BTB domain containing 3	RHOBTB3		NC		NC	2.64	I
228405_at	Rhophilin, Rho GTPase binding protein 1	RHPN1		NC		NC	2	D
210056_at	Rho family GTPase 1	RND1		NC		NC	4.29	D
204730_at	Regulating synaptic membrane exocytosis 3	RIMS3		NC		NC	3.25	D
209684_at	Ras and Rab interactor 2	RIN2		NC	1.52	MD	4.93	D
201011_at	Ribophorin I	RPN1		NC		NC	2	I
204217_s_at	Reticulon 2	RTN2	1.52	MD	2.83	D		NC
202598_at	S100 calcium binding protein A13	S100A13		NC		NC	2.47	D
218143_s_at	Secretory carrier membrane protein 2	SCAMP2		NC		NC	2	D
1552365_at	Scinderin	SCIN		NC		NC	3.04	D
228730_s_at	Secernin 2	SCRN2		NC		NC	2.64	D
202375_at	SEC24 related gene family, member D (*S. cerevisiae*)	SEC24D		NC		NC	3.74	I
1556416_s_at	SEC31-like 1	SEC31L1		NC		NC	2.83	D
201308_s_at	Septin 11	SEPTIN 11		NC		NC	2	D
232637_at	Septin 2	SEPTIN 2		NC		NC	2	D
232055_at	Sideroflexin 1	SFXN1		NC		NC	2.3	D
204404_at	Solute carrier family 12 (sodium/potassium/chloride transporters), member 2	SLC12A2	2	D	2.3	D	2.47	D
209131_s_at	Synaptosomal-associated protein, 23kDa	SNAP23		NC	1.63	MD	4.93	D
219793_at	Sorting nexin 16	SNX16		NC		NC	2	I
218705_s_at	**Sorting nexin 24**	**SNX24**	**2**	**I**	**3.25**	**I**	**5.66**	**I**
210942_s_at	ST3 beta-galactoside alpha-2,3-sialyltransferase 6	ST3GAL6	2.15	D		NC		NC
202558_s_at	Stress 70 protein chaperone, microsome-associated, 60kDa	STCH	1.63	MI		NC	2.47	I
201061_s_at	Stomatin	STOM		NC	2.83	D		NC
244068_at	Cbl-interacting protein Sts1	STS-1		NC		NC	2.15	D
221638_s_at	Syntaxin 16	STX16		NC		NC	2	D
210613_s_at	Synaptogyrin 1	SYNGR1		NC		NC	2	D
210612_s_at	Synaptojanin 2	SYNJ2		NC	1.63	MD	3.49	D
219156_at	Synaptojanin 2 binding protein	SYNJ2BP		NC		NC	3.25	D
225895_at	Synaptopodin 2	SYNPO2		NC		NC	13	I
230303_at	Synaptoporin	SYNPR		NC		NC	2.15	D
228072_at	Synaptotagmin XII	SYT12		NC		NC	2	D
227703_s_at	Synaptotagmin-like 4 (granuphilin-a)	SYTL4		NC	2.47	I		NC
242093_at	**Synaptotagmin-like protein 5**	**SYTL5**	**2**	**I**	**5.28**	**I**	**9.19**	**I**

1555427_s_at	Synaptotagmin binding, cytoplasmic RNA interacting protein	SYNCRIP		NC		NC	2	I
225973_at	Transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	TAP2		NC		NC	3.04	I
211573_x_at	Transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase)	TGM2		NC	2.15	D		NC
213135_at	T-cell lymphoma invasion and metastasis 1	TIAM1		NC	1.42	MI	2.47	I
209387_s_at	Transmembrane 4 L six family member 1	TM4SF1	8	D		NC	3.74	D
210372_s_at	Tumor protein D52-like 1	TPD52L1		NC	2.3	I	4.29	I
202368_s_at	Translocation associated membrane protein 2	TRAM2		NC	1.75	MD	3.04	D
209114_at	Tetraspanin 1	TSPAN1		NC	2.47	D	18.38	D
209264_s_at	Tetraspanin 4	TSPAN4		NC		NC	2.83	D
227834_at	Taxilin beta	TXLNB		NC	2.47	D		NC
240226_at	Ubiquitin specific protease 8	USP8	3.74	I		NC		NC
214792_x_at	Vesicle-associated membrane protein 2 (synaptobrevin 2)	VAMP2		NC		NC	2.47	D
202546_at	Vesicle-associated membrane protein 8 (endobrevin)	VAMP8		NC		NC	2.15	D
220400_at	Vacuolar protein sorting 13 homolog B (yeast)	VPS13B		NC	2.64	D	2.3	D
232386_at	Vacuolar protein sorting 13 homolog C (*S. cerevisiae*)	VPS13C		NC		NC	2.83	D
213085_s_at	WW and C2 domain containing 1	WWC1		NC		NC	2.47	I

I, increase; D, decrease; MI, marginal increase; MD, marginal decrease; NC, no change; Bold, genes showing regulation in all three cell lines.