

Table S1. Selected functional pathways enriched with EMP2 mRNA upregulation based on TCGA database (www.cbioportal.org; N=1105 samples). The top 50 pathways involved with breast cancer and having a nominal p value<0.05 are included, and pathways highlighting metastasis, therapeutic resistance, and hypoxia are bolded.

NAME	SIZE	NOM p-val	FDR q-val
FINETTI_BREAST_CANCERS_KINOME_BLUE	21	0	7.29E-05
LIM_MAMMARY_STEM_CELL_DN	405	0	7.06E-05
ANASTASSIOU_MULTICANCER_INVASIVENESS_SIGNATURE	63	0	3.86E-04
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_4	278	0	0.001376694
MASRI_RESISTANCE_TO_TAMOXIFEN_AND_AROMATASE_INHIBITORS_UP	20	0	0.001890217
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_UP	204	0	0.00382444
SANDERSON_PPARA_TARGETS	15	0	0.003980889
STEIN_ESR1_TARGETS	82	0	0.004202243
DUTERTRE ESTRADIOL_RESPONSE_6HR_UP	218	0	0.004647776
GINESTIER_BREAST_CANCER_ZNF217_AMPLIFIED_UP	70	0	0.007160431
RIGGINS_TAMOXIFEN_RESISTANCE_DN	214	0	0.009965614
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_1	486	0	0.014304999
SMID_BREAST_CANCER_ERBB2_UP	133	0	0.014047835
FARMER_BREAST_CANCER_CLUSTER_4	19	0	0.0145728
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_5	433	0	0.014851739
SOTIRIOU_BREAST_CANCER_GRADE_1_VS_3_DN	48	0	0.020131387
FARMER_BREAST_CANCER_BASAL_VS_LUMINAL	319	0	0.020080987
FARMER_BREAST_CANCER_APOCRINE_VS_LUMINAL	310	0	0.029645585
DUTERTRE ESTRADIOL_RESPONSE_24HR_UP	313	0	0.03618678
BHAT_ESR1_TARGETS_VIA_AKT1_UP	266	0	0.039732847
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_4	105	0	0.0722964
DOANE_RESPONSE_TO_ANDROGEN_UP	175	0	0.087973654
POOLA_INVASIVE_BREAST_CANCER_DN	132	0	0.105667904
RICKMAN_METASTASIS_UP	315	0	0.10884604
LIU_CMYB_TARGETS_UP	158	0	0.1111242
FARMER_BREAST_CANCER_APOCRINE_VS_BASAL	320	0	0.11942397
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_POORLY_DN	355	0	0.20948274
BIDUS_METASTASIS_UP	207	0	0.25332585
FINETTI_BREAST_CANCERS_KINOME_GRAY	15	0.00258398	0.008974472
RAMALHO_STEMNESS_UP	196	0.00492611	0.15747376
CREIGHTON_AKT1_SIGNALING_VIA_MTOR_UP	34	0.00595238	0.087086536
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_LOBULAR_NORMAL_UP	71	0.0070922	0.07324587
ZHANG_BREAST_CANCER_PROGENITORS_UP	397	0.00787402	0.32233697
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_7	366	0.00840336	0.27146798
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_13	159	0.00862069	0.228288
ALONSO_METASTASIS_UP	190	0.00862069	0.24004322
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_UP	43	0.00869565	0.060420014
WELCSH_BRCA1_TARGETS_UP	195	0.00943396	0.24838816
KOBAYASHI_EGFR_SIGNALING_24HR_UP	98	0.01020408	0.20334809
NIKOLSKY_BREAST_CANCER_17Q11_Q21_AMPLICON	126	0.01229508	0.16212785
SMID_BREAST_CANCER_LUMINAL_A_UP	79	0.01706485	0.11982087
WINTER_HYPOXIA_UP	87	0.01706485	0.21990183
STEIN_ESRRA_TARGETS	500	0.01724138	0.42583078
STOSSI_RESPONSE_TO ESTRADIOL	49	0.0212766	0.13658299
NIKOLSKY_BREAST_CANCER_12Q13_Q21_AMPLICON	42	0.02312139	0.15112886
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_10	63	0.02614379	0.2265053
CHANDRAN_METASTASIS_TOP50_UP	35	0.02754821	0.12955827
NELSON_RESPONSE_TO_ANDROGEN_UP	84	0.03358209	0.25053498
CHANDRAN_METASTASIS_UP	199	0.04568528	0.4230729