

Name	Size	NES	NOM p-val	FDR q-val
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_UP	210	-2.6877472	0	0
GOZGIT_ESR1_TARGETS_DN	320	-2.5058138	0	0
LIM_MAMMARY_STEM_CELL_DN	128	-2.4243438	0	0
COLDREN_GEFITINIB_RESISTANCE_DN	114	-2.412589	0	0
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	108	-2.3623729	0	0
SMID_BREAST_CANCER_BASAL_DN	232	-2.3525863	0	0
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_1	166	-2.2972343	0	0
<b>CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_UP</b>	<b>119</b>	<b>-2.2937005</b>	<b>0</b>	<b>0</b>
ONDER_CDH1_TARGETS_2_DN	208	-2.2725217	0	9.15E-05
JOHNSTONE_PARVB_TARGETS_3_UP	153	-2.264569	0	8.24E-05
WU_CELL_MIGRATION	100	-2.17246	0	2.29E-04
JAEGER_METASTASIS_DN	107	-2.1406536	0	2.79E-04
SWEET_LUNG_CANCER_KRAS_UP	121	-2.049731	0	0.001196145
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_4	104	-1.9869702	0.001968504	0.00253891
DELYS_THYROID_CANCER_UP	145	-1.8365674	0.001949318	0.016243933
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_5	154	-1.7891937	0.001908397	0.02470445
LEI_MYB_TARGETS	106	-1.7160335	0.017509727	0.04557685
SCHAEFFER_PROSTATE_DEVELOPMENT_6HR_DN	100	-1.7016716	0.017077798	0.047863774
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_7	143	-1.6785495	0.005586592	0.054197457
HAN_SATB1_TARGETS_DN	132	-1.6709856	0.024761904	0.054889996
HAN_SATB1_TARGETS_UP	124	-1.6657716	0.003891051	0.054233316
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_UP	161	-1.6566508	0.009727626	0.056134533
NUYTEN_NIPP1_TARGETS_DN	217	-1.6416765	0.001831502	0.060631115
FARMER_BREAST_CANCER_APOCRINE_VS_LUMINAL	105	-1.6390626	0.019193858	0.059284057
MEISSNER_NPC_HCP_WITH_H3_UNMETHYLATED	107	-1.627727	0.026465029	0.0621942
FARMER_BREAST_CANCER_BASAL_VS_LULMINAL	138	-1.6017549	0.011764706	0.073144265
MEISSNER_NPC_HCP_WITH_H3K4ME2	110	-1.5669643	0.045028143	0.091240816
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	134	-1.5455319	0.036053132	0.103049606
DUTERTRE ESTRADIOL_RESPONSE_24HR_DN	202	-1.5409155	0.019963702	0.10284284

BASAKI_YBX1_TARGETS_DN	122	-1.5195823	0.058708414	0.11505124
BRUINS_UVC_RESPONSE_VIA_TP53_GROUP_B	134	-1.4670229	0.040665433	0.15588571
LEE_BMP2_TARGETS_UP	214	-1.4445255	0.055028465	0.17212844
DODD_NASOPHARYNGEAL_CARCINOMA_UP	371	-1.4350446	0.020754717	0.17613536
VECCHI_GASTRIC_CANCER_EARLY_UP	107	-1.3976314	0.12037037	0.20976558
YOSHIMURA_MAPK8_TARGETS_UP	200	-1.3872918	0.067567565	0.21526442
MASSARWEH_TAMOXIFEN_RESISTANCE_UP	186	-1.3847188	0.06923077	0.21202467
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	135	-1.3780655	0.10754717	0.21410908

Supplementary Materials Table 4. The negatively enriched GSEA gene sets in the gene expression arrays of MCF-7 and MCF-7-TNR cells (initially reported in Antoon JW, et al. Altered death receptor signaling promotes epithelial-to-mesenchymal transition and acquired chemoresistance. *Sci Rep.* 2012;2:539. PubMed PMID: 22844580). FDR cutoff was set at 25% as recommended by GSEA's user guide.