

Name	Size	NES	NOM p-val	FDR q-val
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	171	2.4994824	0	0
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_UP	113	2.3060617	0	6.19E-04
KIM_BIPOLAR_DISORDER_OLIGODENDROCYTE_DENSITY_CORR_UP	111	2.2292998	0	0.004254058
GOBERT_OLIGODENDROCYTE_DIFFERENTIATION_UP	138	2.1291723	0	0.018029978
KIM_ALL_DISORDERS_OLIGODENDROCYTE_NUMBER_CORR_UP	117	2.1263108	0	0.014680453
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	155	2.0945652	0	0.020007273
LIM_MAMMARY_STEM_CELL_UP	143	2.0699186	0	0.024625184
MARTENS_TRETINOIN_RESPONSE_DN	101	2.0469184	0.004166667	0.027763413
SMID_BREAST_CANCER_BASAL_UP	186	1.9959226	0	0.04519352
VECCHI_GASTRIC_CANCER_EARLY_DN	103	1.95738	0.02016129	0.06096862
PUJANA_CHEK2_PCC_NETWORK	131	1.8998824	0.013215859	0.09522923
MATSUDA_NATURAL_KILLER_DIFFERENTIATION	119	1.815515	0.029598309	0.16583145
SMID_BREAST_CANCER_LUMINAL_B_DN	155	1.7988518	0.019607844	0.17174272
DURAND_STROMA_MAX_UP	111	1.7765079	0.031982943	0.18249582
LIU_PROSTATE_CANCER_DN	163	1.7622806	0.019438446	0.18519607
JAATINEN_HEMATOPOIETIC_STEM_CELL_UP	108	1.7284185	0.044210527	0.20740241
PUJANA_BRCA1_PCC_NETWORK	255	1.7199526	0.010504202	0.2049493
FARMER_BREAST_CANCER_APOCRINE_VS_BASAL	113	1.7196383	0.049217	0.19388424
BAELDE_DIABETIC_NEPHROPATHY_DN	121	1.6978906	0.05111111	0.20527944
BENPORATH_SUZ12_TARGETS	237	1.6935513	0.01793722	0.19998081
BENPORATH_EED_TARGETS	253	1.6495397	0.013100437	0.23030736
CASORELLI_ACUTE_PROMYELOCYTIC_LEUKEMIA_DN	147	1.6411072	0.058165547	0.22822633
WONG_ADULT_TISSUE_STEM_MODULE	221	1.6076744	0.019823788	0.24926339
BENPORATH_PRC2_TARGETS	145	1.6018872	0.067940556	0.24390605
MARTINEZ_RB1_AND_TP53_TARGETS_DN	126	1.6016846	0.06382979	0.2342927
DIAZ_CHRONIC_MEYLOGENOUS_LEUKEMIA_UP	242	1.5980266	0.017429193	0.2292103
MARTINEZ_TP53_TARGETS_DN	128	1.5890613	0.06666667	0.22853562
BENPORATH_ES_WITH_H3K27ME3	244	1.5829636	0.028017242	0.22611737
GRAESSMANN_APOPTOSIS_BY_SERUM_DEPRIVATION_UP	116	1.5649861	0.06036217	0.23218066

WAKABAYASHI_ADIPOGENESIS_PPARG_RXRA_BOUND_8D	159	1.5530957	0.08176101	0.23440523
PUJANA_ATM_PCC_NETWORK	235	1.5408263	0.0389016	0.23790386
KIM_ALL_DISORDERS_CALB1_CORR_UP	108	1.5398954	0.081932776	0.23094082
FLECHNER_BIOPSY_KIDNEY_TRANSPLANT_OK_VS_DONOR_UP	114	1.5276811	0.08510638	0.23330861
DOUGLAS_BMI1_TARGETS_UP	115	1.5263611	0.07484408	0.22758655
ONKEN_UVEAL_MELANOMA_DN	131	1.5201589	0.084474884	0.22577167
MARTINEZ_RB1_TARGETS_DN	122	1.4954373	0.08039216	0.23958743
REN_ALVEOLAR_RHABDOMYOSARCOMA_DN	117	1.4869964	0.07535642	0.2406419
FOSTER_TOLERANT_MACROPHAGE_DN	105	1.4847691	0.104477614	0.23573768
RIGGI_EWING_SARCOMA_PROGENITOR_UP	126	1.4659555	0.099585064	0.2443301
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_DN	107	1.4624575	0.119373776	0.24100202
ENK_UV_RESPONSE_KERATINOCYTE_DN	113	1.4546819	0.10229645	0.24133034
MOHANKUMAR_TLX1_TARGETS_UP	103	1.4494942	0.09756097	0.23952197
HAMAI_APOPTOSIS_VIA_TRAIL_UP	162	1.447156	0.084070794	0.236071

Supplementary Materials Table 5. The positively 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.