

Table 2. Association analysis between chemical activity in the p53RE assay and chemical-induced increased expression of downstream genes in the p53 signaling pathway

NCBI gene name	NCBI gene ID	log10 (Pvalue)	N_P	N	n_p	n
CDKN1A	1026	-10.7	208	3784	36	192
MDM2	4193	-8.7	208	3784	20	76
TP53	7157	-7.2	208	3784	27	158
FAS	355	-6.1	208	3784	19	97
GADD45A	1647	-5.6	208	3784	20	114
BAX	581	-5.5	208	3784	28	202
SFN	2810	-4.0	208	3784	9	36
EI24	9538	-2.4	208	3784	5	20
GTSE1	51512	-2.0	208	3784	4	16
SHISA5	51246	-1.8	208	3784	3	10
SERPINE1	5054	-1.8	208	3784	9	73
DDB2	1643	-1.7	208	3784	4	20
PTEN	5728	-1.3	208	3784	4	25
STEAP3	55240	-1.3	208	3784	2	7
PIDD1	55367	-0.9	208	3784	2	12
IGFBP3	3486	-0.6	208	3784	4	46
RPRM	56475	-0.3	208	3784	1	12

Bold text: significant association after Bonferroni correction.

N_P: number of chemical–gene interactions (CHEMICAL results in increased expression of GENE); N: number of Tox21 chemical in Comparative Toxicogenomics Database (CTD); n_p: number of chemical–gene interactions (CHEMICAL results in increased expression of GENE) that the chemical is also active in p53RE assay; n: number of chemical–gene interactions (CHEMICAL results in increased expression).