Exploring redox vulnerabilities in JAK2^{V617F}-positive cellular models

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Supplementary Material

Supplementary Table: 1

Supplementary Figure: 1

Supplementary Table 1. RNA-seq data displayed as normalized counts[1] and fold change in naïve and ruxolitinib-treated SET2 cells.

Supplementary Figure 1. Expression of NADPH oxidase family genes in SET2 cells. Gene expression data was obtained from Meyer *et al.* (GEO accession GSE69827). Data were expressed mean±SD of mRNA counts from three experimental replicates. *NOX1* and *NOX3* mRNA counts were not available in the RNAseq database. Note that *DOUX2* and *CYBB* were the predominant transcripts

Supplementary Table 1. RNA-seq data displayed as normalized counts[1] and fold change in naïve and ruxolitinib-treated SET2 cells.

Genes		SET2 naïve cells				Ruxolitinib-treated SET2 cells				Fold change
		#1	#2	#3	Mean	#1	#2	#3	Mean	
NM_000625	**NOS2**	33	13	22	23	7	2	2	3,5	**0,154**
NM_014331	**SLC7A11**	3337	3022	3172	3177	516	484	518	505,9	**0,159**
NM_000547	**TPO**	207	182	183	191	68	82	51	67,0	**0,351**
NM_003329	**TXN**	2010	1358	1429	1599	545	471	692	569,1	**0,356**
NM_004052	**BNIP3**	1314	803	905	1007	340	465	432	412,3	**0,409**
NM_181782	**NCOA7**	3438	2974	3435	3282	1599	1637	1482	1572,6	**0,479**
NM_000697	ALOX12	13	9	13	12	6	4	8	5,8	0,504
NM_004905	PRDX6	15279	12357	12523	13386	6550	7137	7111	6932,7	0,518
NM_183079	PRNP	1721	1493	1366	1527	936	877	946	919,8	0,603
NM_000433	NCF2	49	31	57	46	26	21	37	28,2	0,615
NM_021953	FOXM1	3447	2990	3198	3212	1890	1891	2231	2003,9	0,624
NM_012331	MSRA	277	202	179	219	137	99	185	140,4	0,640
NM_012212	PTGR1	207	136	95	146	57	96	135	96,2	0,658
NM_014762	DHCR24	11481	8895	10136	10170	6912	7051	7470	7144,4	0,702
NM_006406	PRDX4	2288	1608	1499	1798	1181	1279	1358	1272,8	0,708
NM_001450	FHL2	3299	2966	3164	3143	2186	2369	2439	2331,6	0,742
NM_004417	DUSP1	108	51	50	69	55	62	39	52,2	0,751
NM_002574	PRDX1	2904	2178	2147	2410	1635	1690	2252	1859,0	0,771
NM_000169	GLA	2518	2243	2437	2399	1739	1873	2004	1872,0	0,780
NM_002085	GPX4	4614	3833	4478	4309	3596	3181	3678	3484,7	0,809
NM_003330	TXNRD1	6122	5185	5148	5485	4234	4356	4826	4472,2	0,815
NM_000636	SOD2	3714	2991	2946	3217	2884	2519	2684	2695,4	0,838
NM_002061	GCLM	316	245	225	262	207	207	245	219,8	0,838
NM_000637	GSR	2591	2186	2258	2345	2017	2044	2074	2044,9	0,872
NM_024505	NOX5	12	4	11	9	15	2	7	8,0	0,879
NM_001513	GSTZ1	1192	1122	1088	1134	933	1052	1063	1016,1	0,896
NM_022126	LHPP	273	238	252	254	250	205	262	239,2	0,940
NM_080725	SRXN1	689	736	673	699	601	666	753	673,3	0,963
NM_014245	RNF7	695	686	628	670	614	638	688	646,6	0,966
NM_001017963	HSP90AA1	27688	21562	20296	23182	23110	22578	22603	22763,5	0,982
NM_000903	NQO1	500	438	326	421	289	341	670	433,1	1,028
NM_003900	SQSTM1	5219	5481	6668	5789	5416	6014	6725	6051,4	1,045
NM_000178	GSS	1857	2086	1939	1961	2025	1925	2222	2057,3	1,049
NM_000963	PTGS2	57	30	20	36	30	45	41	38,6	1,071
NM_001979	EPHX2	393	387	434	405	443	395	470	436,0	1,078
NM_000852	GSTP1	3946	5247	5533	4909	4528	5206	6176	5303,3	1,080
NM_000962	PTGS1	9536	8222	9189	8982	9627	9879	9703	9736,2	1,084
NM_006793	PRDX3	1104	907	906	972	1165	1031	992	1062,8	1,093
NM_001498	GCLC	1818	1700	1568	1696	1671	1975	2122	1922,6	1,134
NM_004282	BAG2	708	546	544	599	660	699	694	684,3	1,142
NM_020992	PDLIM1	7779	6241	6141	6720	8104	7817	8063	7994,5	1,190
NM_002452	NUDT1	549	523	513	528	607	601	759	655,5	1,241
NM_003355	UCP2	3168	2413	2381	2654	3353	3387	3452	3397,2	1,280
NM_181652	PRDX5	1763	1546	1577	1629	2034	2123	2125	2093,7	1,286
NM_004045	ATOX1	230	261	146	212	316	260	254	276,8	1,305
NM_012237	SIRT2	1609	1707	1726	1681	2247	2045	2303	2198,5	1,308
NM_203472	VIMP	54	44	22	40	33	45	83	53,5	1,332
NM_000581	GPX1	2991	3018	2729	2913	3834	3806	4245	3961,4	1,360
NM_002437	MPV17	461	802	832	698	917	977	993	962,6	1,379
NM_024108	TRAPPC6A	682	685	595	654	927	883	959	923,3	1,412

NM_000397	CYBB	69	60	72	67	96	102	89	95,6	1,420
NM_000454	SOD1	2162	1702	1329	1731	2653	2314	2511	2492,9	1,440
NM_002133	HMOX1	587	677	701	655	899	890	1073	954,2	1,456
NM_006440	TXNRD2	500	534	603	546	831	768	895	831,2	1,523
NM_005809	PRDX2	3453	2857	2671	2994	4589	4735	5452	4925,1	1,645
NM_000265	NCF1	29	56	28	38	77	53	67	65,8	1,748
NM_002032	FTH1	13102	11688	10637	11809	20732	18442	24359	21177,8	1,793
NM_002985	CCL5	30	6	14	17	25	36	34	31,8	1,860
NM_000250	MPO	11	25	15	17	40	8	47	31,7	1,879
Hs.654439	**APOE**	4688	6400	6341	5810	12137	11212	11643	11664,3	**2,008**
NM_001752	**CAT**	5744	4789	4920	5151	10590	10832	11163	10861,5	**2,109**
NM_003319	**TTN**	75	54	41	57	126	124	113	121,0	**2,139**
NM_005125	**CCS**	770	1435	1447	1217	2696	2866	2748	2769,8	**2,275**
NM_005410	**SEPP1**	348	281	274	301	688	761	709	719,4	**2,388**
NM_006121	**KRT1**	26	19	22	23	40	61	70	57,2	**2,537**
NM_001354	**AKR1C2**	256	170	158	195	340	363	983	562,2	**2,889**
NM_005345	**HSPA1A**	184	260	241	228	772	571	809	717,1	**3,144**
NM_014080	**DUOX2**	318	702	616	545	3458	3659	3518	3544,9	**6,504**
NM_175940	**DUOX1**	4	10	2	5	62	51	71	61,5	**12,086**
NM_002083	GPX2	6	4	0	3	9	0	338	115,9	34,189
NM_001159	AOX1	0	2	1	1	5	0	6	3,6	3,368
NM_000477	ALB	0	1	0	0	2	0	1	1,0	2,668
NM_003019	SFTPD	0	1	0	0	0	0	2	0,7	1,857
NM_006151	LPO	0	4	3	2	0	1	1	0,7	0,268
NM_134268	CYGB	5	0	0	2	0	0	0	0,0	0,000
NM_002084	GPX3	6	0	0	2	0	0	0	0,0	0,000
NM_005368	MB	0	0	0	0	0	0	0	0,0	0,000
NM_016931	NOX4	0	0	0	0	0	0	0	0,0	0,000
NM_003102	SOD3	0	0	0	0	0	0	0	0,0	0,000
NM_003122	SPINK1	0	0	0	0	0	0	0	0,0	0,000
NM_005954	MT3	6	1	0	2	1	0	0	0,3	0,135

[1]RNA-seq data was obtained from GEO database (https://www.ncbi.nlm.nih.gov/geo; GEO accession GSE69827; naïve SET2 cells [GSM1817344. GSM1817345 and GSM1817346] and ruxolitinib-treated SET2 cells [GSM1817332. GSM1817333 and GSM1817334]. Genes with normalized counts=0 in any condition/replicate were excluded from heatmap illustrated in Figure 1A.

Supplementary Figure 1.