

Supplementary Table 2. Expression of genes significantly up- or down-regulated between TX2A analogue U46619 treated Arhgef1 KO vs WT CD8 T cells. Naïve WT and Arhgef1 KO CD8⁺ T cells were stimulated in vitro with anti-CD28 antibodies and rIL-2 in the presence of TX2A analogue or vehicle control for 5 days. Data are representative of three to four biological replicates per group.

Gene name	WT_DS_Veh	WT_DS_Veh_2	WT_DS_Veh_3	WT_DS_Veh_4	KO_DS_Veh	KO_DS_Veh_2	KO_DS_Veh_3	WT_DS_U46619_1	WT_DS_U46619_2	WT_DS_U46619_3	WT_DS_U46619_4	KO_DS_U46619_1	KO_DS_U46619_2	KO_DS_U46619_3	KO_DS_U46619_4	Cluster	
B3gap2	1.831392963	0	2.34948983	0	3.800179466	1.028552611	0.902064715	0	12.71904008	0.873901969	0.851283629	0.867528106	2.460421576	0.903554652	2.874262688	1	
Ighf2p	0.91596482	0	3.91506472	8.62609494	1.166816221	2.80565123	1.80412943	0	12.4272822	0.857093984	3.495607876	26.48437957	0	0	7.228437213	2.155697016	
Pgpm	31.13366037	30.10595632	31.9703026	32.3904543	11.4003384	14.0266611	12.3307072	17.263911	50.1714621	66.31680435	56.75224193	14.7479781	5.112505891	12.64976512	20.83044049	4	
Serpine2	505.4531614	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	513.7538092	5	
Hr2b	1.831392963	1.58452407	0	1.752518839	0	0.70142806	1.80182493	4.190370065	10.5339772	5.24341813	6.621094891	0.670296744	8.052804315	0.903554652	2.874262688	1	
Tnfrsf11a	17.39823135	26.14464628	20.3621936	19.84001665	5.700269198	4.208476834	1.8582433	36.8752567	35.3643676	55.05582404	45.40179354	8.675281063	14.484533046	5.401773258	4.311394032	3	
Cd55	14.65114737	36.44455239	42.2907099	51.75665518	39.9108439	41.38355554	46.1155931	107.27437	74.4889984	80.63206705	90.6350878	54.6542707	21.30210788	33.43352211	55.37955674	2	
Pdcd3	318.40412319	318.4895274	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	318.930111	6	
Plgla2a	0	0	0	0	3.800179466	0	1.8014293	4.190370065	0	4.369508045	6.621094891	0.867528106	8.052804315	0	0	7.185565672	
Tnfrsf4	215.1886732	246.3934846	238.8641948	260.580044	154.5406316	185.1729807	185.8253312	6.134707176	50.1078956	522.5933774	40.1033056	255.9207914	234.321867	199.68575	217.0068329	3	
Fam78b	0	0.79222609	0	0.50959554	2.10423447	5.412386298	5.24666117	0	1.99174396	1.77651172	0.89114398	1.17776538	2.10663855	4.4943022	0	1	
Macrks	39.37494871	34.85952337	39.18348427	36.9322417	41.6860108	49.8003021	40.5929127	17.8920434	133.17297	171.2847659	114.4503546	62.4602365	46.8646733	30.7688518	45.9082433	1	
Gna13	8.241268334	6.376786026	8.614774239	8.614774239	12.03309164	11.2266408	7.21651778	32.3601544	7.52411226	38.5168663	2.70089677	5.20516838	3.4083721	5.417773258	1.437131344	3	
Chst3	2.74708945	6.338096688	4.69867767	11.1293246	11.4003384	9.11866474	4.51032574	29.95185033	15.0482245	9.612921658	9.458706988	5.20516838	9.379274767	9.05554652	6.46701094	4	
Cd3e2	32.96507334	41.99898645	42.8212961	37.0222655	5.700269198	11.2266408	3.61453003	10.6509162	72.9416989	84.0602363	51.34480049	18.0659434	16.1869169	12.64976512	20.83044049	4	
Kcnmb4os2	0	0	0	0	1.752518839	1.90008973	5.611302446	0.902064715	6.74052014	0	2.621705907	4.729353494	3.407112425	7.668758836	5.417773258	7.185565672	
Coro6	5.941718889	7.123508077	12.5308701	5.175655518	5.066905954	6.314453003	2.514222039	20.1679553	35.2899073	20.80915537	9.542809169	1.678875836	9.93910177	5.748525376	5.748525376	1	
Ccl1	215.1886732	291.5514201	283.5043886	336.4176377	47.0230636	394.1399568	34.6209555	1027.66463	952.3868309	525.2150833	585.4939625	377.374762	366.396555	403.889239	380.1221405	2	
Cd9	14.5425259	12.6719214	28.0796979	45.1162904	22.1671355	25.2578012	17.4513207	45.9263205	58.55413192	98.91184568	48.4401206	23.65836062	43.7062328	18.6877047	16.6877047	1	
Wnt6	6.40987531	6.667590218	8.614774239	16.3695789	4.73354271	3.507604295	4.5032574	46.93214473	18.8103506	29.1256694	17.9154328	6.94022485	9.379274767	13.5531977	7.548525376	1	
Acaca	0	0	0	0	1.752518839	1.90008973	0	0	6.71771203	6.912921658	6.621094891	0	1.70416863	3.61218606	1.437131344	3	
Cd4	26.63591448	35.65179038	30.54329049	37.0350143	14.56735462	30.16075005	9.922711863	87.15969736	84.70138713	97.7590776	80.399094	13.8804497	20.45002356	14.4568743	12.21561642	1	
Smn5	9.156064816	9.91310043	15.6522358	15.6522358	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Dcxr	47.61621704	57.83512662	61.0865907	55.20700286	44.9687304	5.0172201	46.1356931	105.597326	88.03254234	7.12617855	14.7182169	39.03876478	41.7521344	43.3706228	47.42533435	1	
Zfp750	5.941718889	7.123508077	9.39735534	3.45043769	1.266726489	1.40226511	6.2085889	42.1717467	39.12553437	23.59535316	5.675224193	4.33740453	2.56525495	7.228437213	1.437131344	3	
Fam84a	0.91596482	4.735372051	4.69867767	3.45043769	11.4003384	10.5211509	9.22711863	16.7148026	12.7104008	3.495607876	13.24218978	0.670296744	11.1293047	6.34285621	5.748525376	1	
Hvst1	8.241268334	10.2994611	7.83131295	3.45043769	2007.1786	20.73823295	0	7.19322598	5.54043749	44.3042323	25.5385087	8.25411813	2.5585084	1.437131344	1.437131344	3	
Trim9	0.91596482	0.79222609	2.34948983	0	0	0	0	5.02844708	2.25732468	6.991215751	10.4457769	0.867528106	0	0	1.437131344	3	
Acad1	5.941718889	3.16904304	14.096033	3.45043769	7.600358931	0.70142807	5.41238629	29.329004	0.92089471	16.60413741	17.91754328	2.60283491	3.4083721	5.41237909	2.874262688	1	
Actb	12.81975074	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17
CD300101H6Rk	0.91596482	0.79222609	2.34948983	0	0	0	0	5.02844708	2.25732468	6.991215751	10.4457769	0.867528106	0	0	1.437131344	3	
Id2	32.0497685	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17.42976419	17
CD3003516Rk	0.91596482	0.79222609	2.34948983	0	0	0	0	5.02844708	2.25732468	6.991215751	10.4457769	0.867528106	0	0	1.437131344	3	
Hist2h2ad	1.831392963	0	0	0	1.752518839	1.90008973	5.611302446	0.902064715	6.74052014	0	2.621705907	4.729353494	3.407112425	7.668758836	5.417773258	7.185565672	
Sp	8.241268334	26.35238427	0	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
503340310Rk	0	0	0	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Grm7	0.91596482	0.79222609	2.34948983	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Mn1-2	0.91596482	0.79222609	2.34948983	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Zfp750s	0.91596482	0.79222609	2.34948983	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Atvr	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45.78482408	45
Cd9e6b	12.81975074	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15
Pnp2	12.81975074	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15.84524017	15
Gzmf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bmp1	2.812613834	9.507144102	10.9642812	8.62609494	12.03309164	11.81866474	1.53510015	54.4741085	20.1679553	15.7302544	22.70089677	1.17776538	3.4083721	5.41237909	2.874262688	1	
Tnfrsf1	1.831392963	0.79222609	2.34948983	0	0.8626042	1.90008973	3.507604295	7.21651778	29.329004	35.3634376	31.46047088	4.33740453	10.2501178	11.74621047	5.02699074	1	
Ra14	2.01106109	2.75598259	10.7602919	15.2569965	23.44400594	49.0539784	27.0614144	45.259967	41.38277674	41.94729451	56.75224193	34.70112425	35.7875412	16.26398373	28.02406121	1	
Ar	5.941718889	1.58452407	17.0484515	5.175655518	3.800179466	4.208476834	0	5.19058805	24.8266605	18.3519435	20.3678236	2.60283491	8.052804315	0.903554652	2.874262688	1	
Pnd5	10.9383778	10.6150191	13.6770052	14.4557731	47.5024352	64.5297813	54.1238269	124.5469473	140.7014049	25.3978865	40.195047	62.4602365	58.738775	66.8630442	39.5211166	1	
Ar	10.9383778	10.6150191	13.6770052	14.4557731	47.5024352	64.5297813	54.1238269	124.5469473	140.7014049	25.3978865	40.195047	62.4602365	58.738775	66.8630442	39.5211166	1	
Zfp358a	17.39823135	31.86055021	41.50754861	36.2295563	13.3006213	5.611302446	15.3510015	119.006599	93.293512	101.376284	81.34488009	18.21809023	14.4843336	29.817305	7.90422292	3	
Ypel1	2.74708945	3.16904304	14.096033	3.45043769	7.600358931												

Qas1	204.2003154	132.3077554	102.5941296	87.9961608	133.0062813	201.3054752	205.670755	10.05688816	9.028969471	21.84754922	60.53572472	86.75281063	70.72299816	94.87323842	125.0304269	2
Calp1	12.81975074	11.88393013	11.0109683	11.21392246	5.066905954	7.715540663	2.706194144	5.028440078	3.762070613	0.873901969	4.729353494	19.08561834	1.70416863	3.614218606	4.311394032	2
Qas2	190.4648682	171.128938	115.9078716	101.789115	142.50973	144.491038	175.9038194	17.59955427	37.62070013	28.83870497	55.80637123	141.4070813	94.58135898	119.3656594	140.120306	2
Qas1a	3129.850574	2668.33485	2232.09689	2125.46061	2229.43862	2638.714975	3888.669583	91.32778711	1411.528994	1039.069441	1387.592315	2278.996335	2096.9795	2265.215111	2364.799626	2
Oas1a	282.9502128	209.9494233	141.7521943	196.6749477	167.8412597	183.0687423	222.8099846	64.53109901	97.06142181	69.03825554	91.74945778	142.2746094	128.6647316	105.7158942	143.7131344	2
Tmem116	3.662785926	2.376786026	4.6986776	6.038269398	1.900089733	3.507064929	1.80412943	0	0	0	0	0	0	0	0	2
Abcb9	1399.184224	1286.03469	1083.11207	1117.941808	849.3401126	765.241171	904.7709069	362.0479736	562.0533496	697.3737712	723.5910846	843.2371931	827.37387	781.5747736	819.164866	2
AlxosAp	5.494178889	20.59881222	1.566232589	6.900875357	7.600358931	0.701412806	3.608258859	2.51422039	0	0	0.945870699	5.205168638	5.112505891	1.807109303	1.437131344	2
Stard13	38.32853567	9.507144102	12.77952468	11.26139246	5.066905954	8.416953669	5.410323574	8.30740131	10.53379772	2.621705907	2.837612006	2.602584319	5.964590206	5.260485319	10.77848508	2
Sam9f	1836.887142	1662.957956	1546.743557	1361.197964	1733.5152	2124.579369	2348.074453	458.4264551	589.8826721	565.4145739	781.2891972	1862.535991	1842.206289	1854.094145	2078.810489	2
Hilda	846.103549	645.693369	652.373383	527.564354	626.3962466	652.0269709	693.6877657	142.4725822	186.8559448	244.8722524	612.474843	689.330211	698.330211	691.787421	691.787421	2
Tmem140	0	10.2994011	6.265290356	0.86269042	0	0	0	0	0	0	0	0	0	0	0	2
Try5	0	3.961310043	9.397035534	0	2.533452977	2.809551223	4.510323574	1.676148026	0	0	0	0	3.470112425	1.70416863	0	2
Gpmrb	30.21798389	30.89821833	32.10861307	26.74082021	38.6351579	37.87629151	52.31975346	1.676148026	4.514848735	6.991215751	21.75502607	42.50887721	36.83962555	41.56351397	58.20381943	2
Panc1	15.6684019	24.56012235	37.59174214	22.42734493	17.1008076	20.34097137	35.18952388	20.11577631	4.514848735	6.613221658	13.24218978	21.68802026	38.1187824	28.0101442	22.27535883	2
Rab11fp5	10.98357778	5.54583406	10.18109683	18.97740723	3.800179466	6.312715251	6.314533003	2.51422039	3.762070613	1.747803938	3.783482795	4.337640531	7.668758836	2.10663955	4.311394032	2
Aldh11	10.98357778	28.52143231	28.9786679	32.71957595	15.20071786	12.6294305	21.64955315	2.51422039	12.0362596	13.10852953	22.70089677	14.74797781	9.372927467	5.36042908	15.80644478	2
Btln4d	6530.072876	5020.563438	5261.277576	4743.489199	4900.984784	5046.665137	5610.942526	2189.387396	2302.387215	2682.028948	3027.732107	4324.62761	4744.405467	4365.976107	4940.138995	2
Rasgef1a	30.37484871	57.0248641	68.13502362	99.52004996	81.70385851	79.96105985	68.55691832	55.19910855	20.31531311	26.2105907	22.70089677	100.8332603	83.50426289	82.22347328	68.25370848	2
Ref	0.91596482	3.961310043	3.918506472	3.166816221	1.402825611	1.576556518	0	0	0	0	0	2.602584319	3.408337261	7.228437213	6.467091084	2
Usp18	1334.169774	672.6304552	581.1068085	261.2212584	829.70585	1158.032542	1129.385023	116.4922678	179.0745612	137.2026091	221.3373435	585.5814717	511.2505891	643.3309119	716.409975	2
Sic2a3	4387.101343	3329.377222	3084.091178	2778.464941	2998.341598	3592.630391	4209.930204	793.6550994	992.4342277	1027.700715	1008.155881	3273.193545	3690.377169	2796.501847	3543.955894	2
Piarp	13.73544722	3.169043034	4.69897767	2.587820259	2.533452977	4.90989894	2.760194144	0	0	0.752414123	1.891741398	7.807752957	11.92918041	7.228437213	2.155697016	2
Plekhd6	9.15964816	3.961310043	5.482129061	10.35131304	7.600358931	4.208476834	9.020467148	1.676148026	2.257242368	0.873901969	2.837612006	4.337640531	9.372927467	2.10663955	4.311394032	2
Ap0d1	51.27902907	30.10595632	37.59174214	21.56523549	43.06870061	24.5484462	34.27485916	1.676148026	6.717127103	5.24341813	16.07980188	7.807752957	19.95973925	16.26398373	20.11983882	2
Btln4d1	25.63950148	10.2994011	5.482129061	15.5208955	12.03390164	14.02259511	6.314533003	5.986518091	5.04828245	2.621705907	4.729353494	1.750595213	5.112505891	7.228437213	12.9341821	2
Mansc4	0.91596482	3.169043034	2.349483383	1.752518839	1.900089733	4.90989894	3.608258859	0.838074013	0	0	0	4.337640531	0	2.10663955	1.437131344	2
Syt5	10.0726613	11.88393013	1.566232589	5.176556518	5.700269198	17.53530214	14.43303554	0.838074013	1.604828245	0.873901969	2.837612006	9.542809169	5.964590206	9.93901167	20.11983882	2
Pgylp1	38.49883658	554.4910917	144.8848395	137.1548977	207.1097809	197.7884112	250.7738907	50.2844078	67.7127103	48.93851026	67.15681961	157.8901153	185.7543807	206.0104066	238.563031	2
Sp1	70.56882084	22.18333624	27.41045431	12.93914129	14.56735462	16.83390734	26.15987673	5.02844078	0	0	12.96362756	26.83870497	24.39897659	7.18565672	7.18565672	2
D930208M14Rk	2.74708945	1.585420417	0	7.763844777	0	1.266726489	1.402825611	3.608258859	0.838074013	1.504828245	0	0	0	0	0	2
1302211H12Rk	34.7964663	19.0142882	23.49483883	21.56523549	18.36754038	16.1324453	14.43303554	13.40918423	7.52414126	6.117313782	8.512836289	16.48303402	28.97086772	34.33507676	20.8394049	2
Cyp21	88.00876882	16.83750218	25.8443272	20.70262007	20.9008706	37.87629151	27.06194144	3.252995052	9.78139594	24.46925513	5.67524193	30.36348372	16.18960199	37.0457071	28.74262688	2
Abp1	979.795253	732.9423579	621.9300678	602.1013749	687.8324833	956.256542	1012.11661	273.212193	325.7953151	284.0181399	293.2199166	601.969777	612.6406225	714.7171294	666.829436	2
Cd22	1.33139293	3.169043034	1.566232589	2.587820259	6.333632443	4.90989894	6.314533003	0	0	0	0.945870699	4.337640531	4.260421576	3.614218606	4.317131344	2
Kcnc1	11.90405426	12.6719214	18.97740723	15.83408113	13.26843113	15.83408113	2.51422039	3.762070613	1.747803938	4.729353494	32.96068084	16.18960199	17.74621047	9.341353736	2	
Tmem88a	18.3132963	11.88393013	6.265290356	12.59914129	17.1008076	14.72866862	12.62896012	3.35229652	6.717127103	2.621705907	11.35044839	12.14358349	5.37927467	12.9341821	12.9341821	2
Hsp17a6	79.56882084	79.25088208	65.04645191	66.0661228	43.06870061	42.78618115	50.51602403	25.1422039	16.551107	1.747803938	20.80915537	58.12438512	46.864373	45.1773258	51.0181672	2
Trk2	12.81975074	3.169043034	11.74741942	12.07653188	7.600358931	4.90989894	4.510323574	2.51422039	2.257242368	1.747803938	3.783482795	8.675281063	10.22501178	12.64976512	12.21561642	2
Atrk4	56.77318196	44.36667248	41.50754861	43.9930084	44.3354271	56.11302446	52.31975346	24.30414638	27.08900841	21.84754922	12.29631908	29.49595561	48.56898056	109.7783052	31.61688957	2
Agp7b	979.795253	732.9423579	621.9300678	602.1013749	687.8324833	956.256542	1012.11661	273.212193	325.7953151	284.0181399	293.2199166	601.969777	612.6406225	714.7171294	666.829436	2
Lnc32	1438.559123	1272.372786	1268.127327	1091.200916	1431.400932	1403.527024	1635.443328	562.347628	704.596187	556.6755542	664.9471012	1078.337436	1161.390922	1477.818908	1305.633826	2
Atrk1	921.1906605	721.7508987	744.7863911	633.155314	591.5612702	629.868995	725.2600307	155.8817664	176.0649047	223.718904	322.5419083	704.4328223	745.5737758	639.7166933	713.357123	2
Xral1	7.325571853	4.735372051	12.53908701	6.038269398	6.333632443	9.118366474	5.10323574	0	6.717127103	1.747803938	0	0.867528106	1.70416863	7.228437213	7.18565672	2
Trin34a	531.1039593	513.3857815	400.1954215	395.3877236	474.38987	455.9183237	520.4913404	206.1626072	261.9401147	221.0971981	214.7126486	422.4861878	387.6983634	468.0413095	444.7821509	2
Trin30d	41.35.285311	333.8385182	2780.222595	2505.017755	2785.531548	3259.465308	3730.037596	1278.900944	1775.697329	1490.020857	1685.541585	274.5428251	2662.755898	2853.424283	2	
Trin30d	716.0746486	523.6851876	409.593357	379.5481446	492.123408	624.2573971	664.8216948	159.2364048	212.931967	188.1411194	209.9832951	395.5928165	456.295059	426.8280091	426.8280091	2
Abp1b	71.42432556	84.77203431	83.79825851	75.90962893	58.26941847	85.5723623	88.40324205	28.49451644	38.37310205	27.964683	38.78069885	86.88528252	86.06051583	79.51280934	120.0004672	2
Btln4d1	2.74708945	3.169043034	0.783161294	0	0	0	0	0	0	0	1.735056213	1.70416863	0	0	0	2
Cirx3	5.494178889	5.54583406	10.18109683	7.763844777	5.066905954	3.507064029	4.510323574	1.676148026	0	0	2.621705907	0	0	0	0	2
Bnip3	2693.06352	2444.920558	2290.74678	2044.384325	1919.723993	2134.399188	214.4396911	615.9843996	984.1576723	1232.201776	1363.945548	2226.944649	2189.85669	2070.043707	2245.517725	2
Lmm2d	9.15964816	3.961310043	2.587													