

Supplemental Table 1

Gene Name	Extract	MW	pH	Fc	Fc in	Slide # in File	Band # in slide	CG number	FBgn number																																																																																																																																																																																																																																																					
Actin 57B	CE	27.750	6.23	+2.51	HS>Dube3a-C/A	2	5	CG10067	FBgn0000044																																																																																																																																																																																																																																																					
	CE	40.150	6.35	+2.05	HS>Dube3a	3	7			Actin-5c	ME	59.742	7.78	+66.37	HS>Dube3a	7	24	CG4027	FBgn0000042	ME	60.949	7.78	+27.17	<i>Dube3a</i> ^{15b}	9	28	CE	41.736	5.46	+4.32	hUBE3a-77L	1	5	CE	41.457	5.86	+2.28	hUBE3a-77L	1	6	ME	163.810	7.12	-3.86	HS>Dube3a	7	10	Alcohol Dehydrogenase	CE	26.830	7.12	+4.35	HS>Dube3a	3	19	CG3481	FBgn0000055	ME	68.987	7.18	-2.87	<i>Dube3a</i> ^{15b}	10	17	ME	25.458	7.46	-3.84	HS>Dube3a	7	23	ME	38.859	7.12	-6.22	<i>Dube3a</i> ^{15b}	10	16	Aldehyde Dehydrogenase	CE	52.887	6.22	+6.64	hUBE3a-77L	1	11	CG3752	FBgn0012036	CE	40.675	6.83	+4.92	HS>Dube3a-C/A	2	13	ME	50.620	6.12	+3.19	<i>Dube3a</i> ^{15b}	10	8	Aldolase	CE	37.452	7.78	+34.48	HS>Dube3a-C/A	2	23	CG6058	FBgn0000064	CE	40.260	7.12	+24.84	HS>Dube3a	3	16	CE	29.340	7.67	+2.04	HS>Dube3a	3	25	ME	39.436	7.46	-3.05	<i>Dube3a</i> ^{15b}	9	25	ME	27.382	7.12	-7.71	HS>Dube3a-C/A	8	16	Alpha-Tubulin	CE	51.910	6.22	4.17	hUBE3a-77L	1	12	CG1913	FBgn0003884	Apolipoporphins	ME	61.646	8.38	+33.05	HS>Dube3a-C/A	8	28	CG11064	FBgn0087002	CE	228.690	7.41	+5.88	HS>Dube3a	3	21	CE	60.511	8.55	-390.23	HS>Dube3a-C/A	2	25	Arginine Kinase	CE	38.580	7.12	+110.12	HS>Dube3a	3	17	CG32031	FBgn0000116	CE	37.530	6.76	+32.52	HS>Dube3a	3	10	CE	36.730	7.12	+10.01	HS>Dube3a	3	18	NE	38.387	6.84	+2.46	HS>Dube3a	6	12	ME	38.051	6.33	-2.72	<i>Dube3a</i> ^{15b}	10	4	ME	38.204	6.69	-3.87	HS>Dube3a-C/A	8	10	ME	37.260	6.69	-4.31	<i>Dube3a</i> ^{15b}	10	10	ME	37.510	6.69	-5.85	HS>Dube3a	7	7	CE	24.390	6.53	-6.66	HS>Dube3a-C/A	2	6	CE	37.440	6.53	-8.11	HS>Dube3a	3	4	ATP synthase-β	CE	52.890	4.8	+3.97	hUBE3a-77L	1
Actin-5c	ME	59.742	7.78	+66.37	HS>Dube3a	7	24	CG4027	FBgn0000042																																																																																																																																																																																																																																																					
	ME	60.949	7.78	+27.17	<i>Dube3a</i> ^{15b}	9	28																																																																																																																																																																																																																																																							
	CE	41.736	5.46	+4.32	hUBE3a-77L	1	5																																																																																																																																																																																																																																																							
	CE	41.457	5.86	+2.28	hUBE3a-77L	1	6																																																																																																																																																																																																																																																							
	ME	163.810	7.12	-3.86	HS>Dube3a	7	10																																																																																																																																																																																																																																																							
Alcohol Dehydrogenase	CE	26.830	7.12	+4.35	HS>Dube3a	3	19	CG3481	FBgn0000055																																																																																																																																																																																																																																																					
	ME	68.987	7.18	-2.87	<i>Dube3a</i> ^{15b}	10	17																																																																																																																																																																																																																																																							
	ME	25.458	7.46	-3.84	HS>Dube3a	7	23																																																																																																																																																																																																																																																							
	ME	38.859	7.12	-6.22	<i>Dube3a</i> ^{15b}	10	16																																																																																																																																																																																																																																																							
Aldehyde Dehydrogenase	CE	52.887	6.22	+6.64	hUBE3a-77L	1	11	CG3752	FBgn0012036																																																																																																																																																																																																																																																					
	CE	40.675	6.83	+4.92	HS>Dube3a-C/A	2	13																																																																																																																																																																																																																																																							
	ME	50.620	6.12	+3.19	<i>Dube3a</i> ^{15b}	10	8																																																																																																																																																																																																																																																							
Aldolase	CE	37.452	7.78	+34.48	HS>Dube3a-C/A	2	23	CG6058	FBgn0000064																																																																																																																																																																																																																																																					
	CE	40.260	7.12	+24.84	HS>Dube3a	3	16																																																																																																																																																																																																																																																							
	CE	29.340	7.67	+2.04	HS>Dube3a	3	25																																																																																																																																																																																																																																																							
	ME	39.436	7.46	-3.05	<i>Dube3a</i> ^{15b}	9	25																																																																																																																																																																																																																																																							
	ME	27.382	7.12	-7.71	HS>Dube3a-C/A	8	16																																																																																																																																																																																																																																																							
Alpha-Tubulin	CE	51.910	6.22	4.17	hUBE3a-77L	1	12	CG1913	FBgn0003884																																																																																																																																																																																																																																																					
Apolipoporphins	ME	61.646	8.38	+33.05	HS>Dube3a-C/A	8	28	CG11064	FBgn0087002																																																																																																																																																																																																																																																					
	CE	228.690	7.41	+5.88	HS>Dube3a	3	21																																																																																																																																																																																																																																																							
	CE	60.511	8.55	-390.23	HS>Dube3a-C/A	2	25																																																																																																																																																																																																																																																							
Arginine Kinase	CE	38.580	7.12	+110.12	HS>Dube3a	3	17	CG32031	FBgn0000116																																																																																																																																																																																																																																																					
	CE	37.530	6.76	+32.52	HS>Dube3a	3	10																																																																																																																																																																																																																																																							
	CE	36.730	7.12	+10.01	HS>Dube3a	3	18																																																																																																																																																																																																																																																							
	NE	38.387	6.84	+2.46	HS>Dube3a	6	12																																																																																																																																																																																																																																																							
	ME	38.051	6.33	-2.72	<i>Dube3a</i> ^{15b}	10	4																																																																																																																																																																																																																																																							
	ME	38.204	6.69	-3.87	HS>Dube3a-C/A	8	10																																																																																																																																																																																																																																																							
	ME	37.260	6.69	-4.31	<i>Dube3a</i> ^{15b}	10	10																																																																																																																																																																																																																																																							
	ME	37.510	6.69	-5.85	HS>Dube3a	7	7																																																																																																																																																																																																																																																							
	CE	24.390	6.53	-6.66	HS>Dube3a-C/A	2	6																																																																																																																																																																																																																																																							
	CE	37.440	6.53	-8.11	HS>Dube3a	3	4																																																																																																																																																																																																																																																							
ATP synthase-β	CE	52.890	4.8	+3.97	hUBE3a-77L	1	1	CG11154	FBgn0010217																																																																																																																																																																																																																																																					

ATPalph	ME	60.577	6.12	+103.32	<i>Dube3a</i> ^{15b}	10	7	CG5670	FBgn0002921
	CE	69.420	6.35	+18.06	HS>Dube3a	3	6		
	ME	60.028	6.1	+17	HS>Dube3a-C/A	8	5		
	CE	91.060	6.53	+2.62	HS>Dube3a-C/A	2	8		
	CE	33.120	6.14	+2.35	HS>Dube3a	3	3		
	ME	95.858	6.33	-3	HS>Dube3a	7	1		
	CE	93.860	6.15	-5.56	HS>Dube3a	3	1		
Bellwether	CE	47.862	8.24	+8.94	HS>Dube3a-C/A	2	24	CG3612	FBgn0011211
	ME	53.412	8.01	+5.63	<i>Dube3a</i> ^{15b}	9	29		
	ME	52.414	8.24	+5.35	<i>Dube3a</i> ^{15b}	9	31		
	ME	52.538	7.36	+2.26	<i>Dube3a</i> ^{15b}	10	23		
	ME	52.538	7.26	+2.26	<i>Dube3a</i> ^{15b}	10	19		
	ME	54.332	8.38	+2.15	HS>Dube3a-C/A	8	34		
CG12140	CE	68.300	6.22	+27.67	hUBE3a-77L	1	10	CG12140	FBgn0033465
	NE	70.320	6.43	+23.61	HS>Dube3a	6	11		
	ME	67.300	6.33	-10.78	<i>Dube3a</i> ^{15b}	10	3		
	ME	67.269	6.33	-53.92	HS>Dube3a	7	3		
CG3415 (Mfe2)	ME	62.057	6.97	+9.88	HS>Dube3a-C/A	8	18	CG3415	FBgn0030731
CG3731	NE	46.374	6.05	+5.01	<i>Dube3a</i> ^{15b}	5	20	CG3731	FBgn0038271
	NE	46.374	6.07	+3.27	hUBE3a-77L	5	18		
CG6045	CE	40.170	6.23	+5.76	HS>Dube3a-C/A	2	3	CG6045	FBgn0038349
CG7430	CE	167.620	6.23	+3256	HS>Dube3a-C/A	2	1	CG7430	FBgn0036762
	CE	53.070	7.12	+8.24	HS>Dube3a	3	14		
	CE	51.590	6.76	+5.33	HS>Dube3a	3	8		
	CE	51.380	6.14	+3.36	HS>Dube3a	3	2		
CG7461	ME	63.310	7.79	+21.33	HS>Dube3a-C/A	8	27	CG7461	FBgn0034432
CG7920	CE	48.940	7.92	+3.25	HS>Dube3a	3	27	CG7920	FBgn0039737
Chaoptin	CE	144.040	7.27	+28.36	HS>Dube3a-C/A	2	17	CG1744	FBgn0000313
	ME	175.419	7.6	+8.38	HS>Dube3a-C/A	8	25		
	NE	166.721	7.27	+5.16	<i>Dube3a</i> ^{15b}	4	1		
	NE	157.000	6.91	+3.2	<i>Dube3a</i> ^{15b}	5	28		
Crystallin	ME	58.770	7.29	+33.52	HS>Dube3a	7	17	CG16963	FBgn0005664
	NE	70.856	5.46	+7.71	HS>Dube3a	6	3		
	NE	55.982	6.07	+2.36	hUBE3a-77L	5	16		
Cuticular protein 72Ec	NE	47.553	6.84	+111.34	hUBE3a-77L	5	27	CG4784	FBgn0036619
	NE	43.555	6.51	+94.95	<i>Dube3a</i> ^{15b}	5	22		
	NE	44.382	5.81	+31.37	<i>Dube3a</i> ^{15b}	5	9		
	NE	43.147	6.05	+18.77	<i>Dube3a</i> ^{15b}	5	21		
	NE	47.852	6.07	+15.21	hUBE3a-77L	5	17		
	NE	43.578	7.89	+8.62	<i>Dube3a</i> ^{15b}	4	7		
	NE	50.000	5.58	+3.87	hUBE3a-77L	5	6		

	CE	50.630	5.46	+2.64	hUBE3a-77L	1	4		
Dynamin	NE	94.703	7.46	+2.61	<i>Dube3a</i> ^{15b}	4	2	CG18102	FBgn0003392
Enolase	CE	47.470	7.12	+7.28	HS>Dube3a	3	15	CG17654	FBgn0000579
	CE	21.560	6.53	-2.6	HS>Dube3a-C/A	2	7		
	ME	46.293	6.69	-3.3	<i>Dube3a</i> ^{15b}	10	9		
	ME	47.502	6.69	-3.68	HS>Dube3a-C/A	8	9		
	ME	46.853	6.69	-4.05	Dube3a	7	6		
	ME	45.970	7.26	-10.59	<i>Dube3a</i> ^{15b}	10	20		
	ME	45.970	7.12	-11.19	<i>Dube3a</i> ^{15b}	10	15		
Eps15	CE	96.770	5.46						
				+2.66	hUBE3a-77L	1	2	CG16932	FBgn0035060
ERp60	CE	43.749	6.53	+5.91	Dube3a-C/A	2	11	CG8983	FBgn0033663
Failed Axon Connections	CE	62.200	5.45	+10.75	<i>Dube3a</i> ^{15b}	11	1	CG4609	FBgn0014163
Fasciclin 1	ME	60.950	7.36	+11	<i>Dube3a</i> ^{15b}	10	22	CG6588	FBgn0262742
Fat-body protein 1	NE	47.550	6.91	+60.64	<i>Dube3a</i> ^{15b}	5	29	CG17285	FBgn0000639
Fimbrin	CE	70.910	5.94	+102.3	<i>Dube3a</i> ^{15b}	11	3	CG8649	FBgn0024238
glyceraldehyde 3 p	CE	35.610	8.45	+2.64	Dube3a-C/A	2	28	CG12055	FBgn0001091
Glycogen Phosphorylase	CE	84.490	7.27	+7.54	Dube3a-C/A	2	18	CG7254	FBgn0004507
HSP 70Ab	CE	72.240	6.22	+8.37	hUBE3a-77L	1	9	CG18743	FBgn0013276
HSP 70Ba	CE	58.040	6.83	+30.95	Dube3a-C/A	2	12	CG31449	FBgn0013277
	ME	71.620	6.33	-6.19	HS>Dube3a	7	2		
	ME		6.33	-14.53	<i>Dube3a</i> ^{15b}	10	2		
HSP 70Bb	CE	56.330	6.53	+3.72	Dube3a-C/A	2	10	CG31359	FBgn0013278
HSP cognate 2	CE	63.910	6.23	+5.46	Dube3a-C/A	2	2	CG7756	FBgn0001217
	CE	73.240	6.35	+4.69	HS>Dube3a	3	5		
HSP cognate 4	CE	35.610	7.27	+26.04	Dube3a-C/A	2	21	CG4264	FBgn0001219
	CE	71.800	5.46	+2.35	hUBE3a-77L	1	3		
Malic Enzyme	ME	60.940	6.58	+5.52	HS>Dube3a	7	9	CG10120	FBgn0002719
Myosin Heavy Chain	NE	71.666	6.02	+13.35	HS>Dube3a	6	6	CG17927	FBgn0086783
	CE	254.443	6.22	+7.42	hUBE3a-77L	1	7		
					<i>Dube3a</i> ^{15b}	9	30		
	ME		8.24	+7.34					
	NE	41.181	6.02	+4.27	HS>Dube3a	6	9		
	NE	250.000	6.07	+3.5	hUBE3a-77L	5	13		
	NE	250.000	6.05	+2.89	<i>Dube3a</i> ^{15b}	5	19		
	NE	238.130	5.85	-5.25	HS>Dube3a	6	1		
NADH-ubiquinone oxidoreductase 75 kDa subunit	ME	75.264	6.55	+5.38	<i>Dube3a</i> ^{15b}	10	11	CG2286	FBgn0017566

	ME	77.254	6.33	-6.66	Dube3a-C/A	8	2		
neither inactivation nor	CE	134.820	6.22	+10.91	hUBE3a-77L	1	8	CG5125	FBgn0002938
Phosphoglycerate									
Kinase	CE	46.490	7.67	+1.78	HS>Dube3a	3	23	CG3127	FBgn0250906
Porin	CE	23.670	7.2	-5.6	Dube3a-C/A	2	16	CG6647	FBgn0004363
Prolyl endopeptidase	CE	86.410	5.94	+16.76	<i>Dube3a</i> ^{15b}	11	2	CG5355	FBgn0032242
Pro-phenol Oxidase 1	CE	80.500	6.69	3.35	Dube3a15b	11	4	CG42639	FBgn0261382
	ME	68.990	7.12	-2.87	<i>Dube3a</i> ^{15b}	10	14	CG42639	FBgn0261362
Protein disulfide- isomerase	NE	51.150	6.02	+2.44	HS>Dube3a	6	8	CG6988	FBgn0014002
Punch	ME	32.270	6.33	-9.39	<i>Dube3a</i> ^{15b}	10	5	CG9441	FBgn0003162
Regucalcin	CE	24.399	6.83	+14.04	Dube3a-C/A	2	15	CG1803	FBgn0030362
Transferrin 1	CE	57.009	7.27	+22.01	Dube3a-C/A	2	20	CG6186	FBgn0022355
	CE	70.790	7.12	+16.52	HS>Dube3a	3	13		
Tropomyosin I	NE	36.750	5.58	+2.2	hUBE3a-77L	5	8	CG4898	FBgn0003721
Unidentified	NE	41.900	7.46	+2.29	<i>Dube3a</i> ^{15b}	4	4		