Proteogenomics of adenosine-to-inosine RNA editing in the fruit fly

Supporting information. Tables

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Table S1. List of samples used in this study

sample #	body part	number of flies used	purpose	peptide concentration after trypsin digestion, mg/ml
1	brain	200	shot gun	undefined
2	brain	200	MRM of *cpx* and *Syx1A*	2.43
3	brain	80	MRM of *cpx*, *Syx1A* ,CG4587, *Atx2*, *Cadps*, *RhoGAP100F*, *EndoA*	0.318
5	head	100	genomic DNA sequencing	undefined
6	head	100	ICE products (cDNA) sequencing	undefined

Table S2. Transitions for MRM method. Charge value of peptide ions in superscript. E –collision energy (obtained by Skyline v 3.1 software).

Sample #2					
Amino acid sequences	**Peptide type**	**Parent ion m/z**	**Fragment ion m/z**	**CE**	**Type of fragment**
IEYHVEHAMDYVQTATQDTK	Native peptide (“light”)	793.702235^{+3}	991.5055	32.4	y9
			892.437051	32.4	y8
			764.378474	32.4	y7
			663.330795	32.4	y6
			592.293681	32.4	y5
			613.268955	32.4	b10
IEYHVEHAMDYVQTATQDTK (heavy_K)	Synthetic standard (“heavy”)	796.373634^{+3}	999.5197	32.4	y9
			900.4513	32.4	y8
			772.3927	32.4	y7
			671.345	32.4	y6
			600.3079	32.4	y5
			613.269	32.4	b10

IEYHVEHAVDYVQTATQDTK	Native peptide (“light”)	783.0449^{+3}	991.5055	32	y9
			892.4371	32	y8
			764.3785	32	y7
			663.3308	32	y6
			592.2937	32	y5
			597.2829	32	b10
IEYHVEHAVDYVQTATQDTK (heavy_K)	Synthetic standard (“heavy”)	785.716277^{+3}	999.5197	32	y9
			900.4513	32	y8
			772.3927	32	y7
			671.345	32	y6
			600.3079	32	y5
			597.2829	32	b10
NQIETQVNELK	Native peptide (“light”)	658.346248^{+2}	1073.584	22.7	y9
			960.4997	22.7	y8
			831.4571	22.7	y7
			602.3508	22.7	y5
			503.2824	22.7	y4
NQIETQVNELK (heavy_L)	Synthetic standard (“heavy”)	661.85483^{+2}	1080.601	22.7	y9
			967.5168	22.7	y8
			838.4742	22.7	y7
			609.368	22.7	y5
			510.2996	22.7	y4
NQMETQVNELK	Native peptide (“light”)	667.324459^{+2}	1091.54	22.9	y9
			960.4997	22.9	y8
			831.4571	22.9	y7
			602.3508	22.9	y5
			503.2824	22.9	y4
NQMETQVNELK(heavy_L)	Synthetic standard (“heavy”)	670.833041^{+2}	1098.557	22.9	y9
			967.5168	22.9	y8
			838.4742	22.9	y7
			609.368	22.9	y5
			510.2996	22.9	y4
Sample #3					

IEYHVEHAMDYVQTATQDTK	Native peptide (“light”)	793.702235	991.505465	32.4	y9
			892.437051	32.4	y8
			764.378474	32.4	y7
			663.330795	32.4	y6
			592.293681	32.4	y5
			613.268955	32.4	b10
IEYHVEHAMDYVQTATQDTK	Synthetic standard (“heavy”)	796.373634	999.519664	32.4	y9
			900.45125	32.4	y8
			772.392673	32.4	y7
			671.344994	32.4	y6
			600.30788	32.4	y5
			613.268955	32.4	b10
IEYHVEHAVDYVQTATQDTK	Native peptide (“light”)	783.044878	991.505465	32	y9
			892.437051	32	y8
			764.378474	32	y7
			663.330795	32	y6
			592.293681	32	y5
			597.28292	32	b10
IEYHVEHAVDYVQTATQDTK	Synthetic standard (“heavy”)	785.716277	999.519664	32	y9
			900.45125	32	y8
			772.392673	32	y7
			671.344994	32	y6
			600.30788	32	y5
			597.28292	32	b10
NQIETQVNELK	Native peptide (“light”)	658.346248	1073.583716	22.7	y9
			960.499651	22.7	y8
			831.457058	22.7	y7
			602.350802	22.7	y5
			503.282388	22.7	y4
NQIETQVNELK	Synthetic standard (“heavy”)	661.85483	1080.60088	22.7	y9
			967.516815	22.7	y8
			838.474222	22.7	y7
			609.367966	22.7	y5

			510.299552	22.7	y4
NQMETQVNELK	Native peptide (“light”)	667.324459	1091.540136	22.9	y9
			960.499651	22.9	y8
			831.457058	22.9	y7
			602.350802	22.9	y5
			503.282388	22.9	y4
NQMETQVNELK	Synthetic standard (“heavy”)	670.833041	1098.5573	22.9	y9
			967.516815	22.9	y8
			838.474222	22.9	y7
			609.367966	22.9	y5
			510.299552	22.9	y4
YSLDDNIEQNFLEPLHHMQTK	Native peptide (“light”)	858.076072	991.514196	34.9	y8
			1161.562791	34.9	y19
			1105.020759	34.9	y18
			876.430321	34.9	y14
YSLDDNIEQNFLEPLHHMQTK	Synthetic standard (“heavy”)	860.747472	999.528395	34.9	y8
			1165.569891	34.9	y19
			1109.027859	34.9	y18
			880.43742	34.9	y14
GVGPAPSANASADSSSR	Native peptide (“light”)	765.860782	1149.51307	25.9	y12
			894.391164	25.9	y9
			687.815844	25.9	y15
			575.260173	25.9	y12
GVGPAPSANASADSSSR	Synthetic standard (“heavy”)	770.864917	1159.521339	25.9	y12
			904.399433	25.9	y9
			692.819978	25.9	y15
			580.264307	25.9	y12
GVGPAPSANASADSSSK	Native peptide (“light”)	751.857708	1121.506922	25.5	y12
			673.81277	25.5	y15
			645.302038	25.5	y14
			561.257099	25.5	y12

GVGPAPSANASADSSSK	Synthetic standard (“heavy”)	755.864808	1129.521121	25.5	y12
			677.819869	25.5	y15
			649.309137	25.5	y14
			565.264198	25.5	y12
YLLQIWPQPQAQHQR	Native peptide (“light”)	636.007593	1089.554815	26.4	y9
			864.443474	26.4	y7
			638.320702	26.4	y10
			545.281046	26.4	y9
YLLQIWPQPQAQHQR	Synthetic standard (“heavy”)	639.343682	1099.563084	26.4	y9
			874.451743	26.4	y7
			643.324837	26.4	y10
			550.28518	26.4	y9
YLLQIWPQPQAQHR	Native peptide (“light”)	593.3214	961.496238	24.8	y8
			736.384896	24.8	y6
			574.291413	24.8	y9
			481.251757	24.8	y8
YLLQIWPQPQAQHR	Synthetic standard (“heavy”)	596.65749	971.504507	24.8	y8
			746.393165	24.8	y6
			579.295548	24.8	y9
			486.255891	24.8	y8
LVTTVSTPVFDGR	Native peptide (“light”)	696.380091	977.505071	23.8	y9
			878.436657	23.8	y8
			791.404629	23.8	y7
LVTTVSTPVFDGR	Synthetic standard (“heavy”)	701.384226	987.51334	23.8	y9
			888.444926	23.8	y8
			801.412898	23.8	y7
LVTTVSTPVFDR	Native peptide (“light”)	667.869359	1021.531286	22.9	y9
			920.483607	22.9	y8
			821.415194	22.9	y7
			633.335487	22.9	y5

LVTTVSTPVFDR	Synthetic standard (“heavy”)	672.873494	1031.539555	22.9	y9
			930.491876	22.9	y8
			831.423463	22.9	y7
			643.343756	22.9	y5
LVSVLESTLSK	Native peptide (“light”)	588.347728	963.535703	20.6	y9
			876.503674	20.6	y8
			777.43526	20.6	y7
			664.351196	20.6	y6
			512.34426	20.6	b5
LVSVLESTLSK	Synthetic standard (“heavy”)	592.354828	971.549902	20.6	y9
			884.517873	20.6	y8
			785.449459	20.6	y7
			672.365395	20.6	y6
			512.34426	20.6	b5
LMSVLESTLSK	Native peptide (“light”)	604.333764	963.535703	21	y9
			876.503674	21	y8
			777.43526	21	y7
			664.351196	21	y6
			544.316331	21	b5
LMSVLESTLSK	Synthetic standard (“heavy”)	608.340863	971.549902	21	y9
			884.517873	21	y8
			785.449459	21	y7
			672.365395	21	y6
			544.316331	21	b5
YSLDDNIK	Native peptide (“light”)	484.240189	804.409774	17.4	y7
			717.377745	17.4	y6
			604.293681	17.4	y5
YSLDDNIK	Synthetic standard (“heavy”)	488.247289	812.423973	17.4	y7
			725.391944	17.4	y6
			612.30788	17.4	y5

Table S3. Primers that were designed for the experiment using PerlPrimer free software (http://perlprimer.sourceforge.net/)

#	Gene name	A-to-I coordinate	Forward primer 5'- 3'	Reverse primer 5'- 3'
1	Syx1A	chr3R:24103714: A/G:M244V	DNA: ATATAGATCGGGTCTGGATGAG	DNA: GGATACAGCGTCAACTGGA
			cDNA: ATATAGATCGGGTCTGGATGAG	cDNA: AACTCGTCTGTGTTCACGC
2	Atx2	chr3R:15413305: A/G:K398R	DNA: GGACGCGATCGTGACA	DNA: GTAGGAGTATTGACTCGGCAT
			cDNA: GGACGCGATCGTGACA	cDNA: GTAGGAGTATTGACTCGGCAT
3	Atpalpha	chr3R:20965039: A/G:Y390C	DNA: AGAACTGTCTGGTGAAGAATCT	DNA: CAGAGCCAGTTCCATGCA
			cDNA: AGAACTGTCTGGTGAAGAATCT	cDNA: CAGAGCCAGTTCCATGCA
4	CG4587	chr2L:15651359: A/G:R489G	DNA: GTCGATGTACTGGTTGGCA	DNA: TCGTTCAGATCAACGATTACGA
			cDNA: GTCGATGTACTGGTTGGCA	cDNA: TCGTTCAGATCAACGATTACGA
5	cpx	chr3R:4297504:A /G:I125M	DNA: ACATAACAGTTACAGCTACAGTAGA	DNA: GCTATGTTATCAGTATTACACGTGT
			cDNA: GAAGGAGGAGATCGTGGAGG	cDNA: GCTATGTTATCAGTATTACACGTGT
6	EndoA	chr3R:18907675: A/G:K137E	DNA: GCGGTCAAGGGCATCT	DNA: GGAGCGATTCACCGAACT
			cDNA: GCGGTCAAGGGCATCT	cDNA: GGAGCGATTCACCGAACT
7	alpha-Spec	chr3L:1782670:A/ G:Q1700R	DNA: AGATCGCGACCATAGTCGT	DNA: CACCTATATCGCTGCTGTCA
			cDNA: AGATCGCGACCATAGTCGT	cDNA: CACCTATATCGCTGCTGTCA
8	Cadps	chr4:1265107:A/ G:M1234V	DNA: AATCGACAAAGCGAATGTAGC	DNA: CTGCTGCGAATACCACTGTTC
			cDNA: AATCGACAAAGCGAATGTAGC	cDNA: AATCGACAAAGCGAATGTAGC
9	RhoGAP100 F	chr3R:31837086: A/G:Q1142R	DNA: CGGAGCGGAACAAGATGTCA	DNA: ATATTGCTCATGCTCCCGGC
			cDNA: CGGAGCGGAACAAGATGTCA	cDNA: CGGAGCGGAACAAGATGTCA