Gene ID	Tissue Type	Expression Level 5th Instar (FPKN)	Expression Level Adult Stage (FPKN)	Change in Expression Level (FPKN)
Msex2.07524	Head	74964.41	439.17	-7425.24
Msex2.15420	Head	3602.61	75574.23	71971.62
Msex2.14343	Head	43171.26	2205.55	-40965.71
Msex2.04431	Gut	118.14	82120.42	82002.28
Msex2.15420	Gut	17344.10	62948.05	45603.95
Msex2.14343	Gut	43268.05	3490.07	-39777.98
Msex2.15420	Fat	68477.05	237523.44	169046.38
Msex2.01694	Fat	68823.61	26.09	-68797.52
Msex2.10735	Fat	27176.11	9.57	-27166.54

Gene ID	Tissue Type	Expression Level 5th Instar (FPKN)	Expression Level Adult Stage (FPKN)	Change in Expression Level (FPKN)
Msex2.07524	Head	74964.41	439.17	-7425.24
Msex2.15420	Head	3602.61	75574.23	71971.62
	Gut	17344.096	62948.05	45603.954
	Fat	68477.053	237523.435	169046.382
Msex2.14343	Head	43171.26	2205.55	-40965.71
	Gut	43268.05	3490.07	-39777.98
Msex2.04431	Gut	118.14	82120.42	82002.28
Msex2.01694	Fat	68823.61	26.09	-68797.52
Msex2.10735	Fat	27176.11	9.57	-27166.54

Table 1. Top three genes experiencing the greatest change in expression within the head, gut and fat tissue of *Manduca sexta* between the 5th instar and adult life stage. Positive values under Change in Expression Level indicate an increase in expression level in the adult stage while negative values indicate a decrease in expression level.

Gene ID	Tissue Type	Expression Level 5th Instar (FPKN)	Expression Level Adult Stage (FPKN)	Change in Expression Level (FPKN)
Msex2.07524	Head	74964.41	439.17	-7425.24
Msex2.15420	Head	3602.61	75574.23	71971.62
	Midgut	17344.096	62948.05	45603.954
	Fat	68477.053	237523.435	169046.382
Msex2.14343	Head	43171.26	2205.55	-40965.71
	Midgut	43268.05	3490.07	-39777.98
Msex2.04431	Midgut	118.14	82120.42	82002.28
Msex2.01694	Fat	68823.61	26.09	-68797.52
Msex2.10735	Fat	27176.11	9.57	-27166.54

Table 1. Top three genes experiencing the greatest change in expression within the head, gut and fat tissue of *Manduca sexta* between t
values under Change in Expression Level indicate an increase in expression level in the adult stage while negative values indicate a decrea
function associated with each gene ID were identified from a BLAST analysis

Gene ID	Protein Name	Function	Tissue Type	Expression Level 5th Instar (FPKN)

Msex2.07524	Ejaculatory bulb-specific protein 3-like	Chemosensation, tissue remodeling, host defense	Head	74964.41
Msex2.15420	Uncharacterized		Head	3602.61
			Midgut	17344.096
			Fat	68477.053
Msex2.14343	ATP synthase F0 subunit 6 (mitochondrion)	ATP synthesis, oxidative phosphorylation	Head	43171.26
			Midgut	43268.05
Msex2.04431	Uncharacterized		Midgut	118.14
Msex2.01694	Basic juvenile hormone-suppressible protein 2-like	Energy storage	Fat	68823.61
Msex2.10735	Basic juvenile hormone-suppressible protein 1-like	Energy storage	Fat	27176.11

Protein Name	Function
Ejaculatory bulb-spe	Chemosensation, tissue remodeling, host defense
	Uncharacterized
se F0 subunit 6 (mitc	nthesis, oxidative phosphor
Uncharacterized	
basic juvenile hormc	Energy storage
basic juvenile hormc	Energy storage

he 5th instar and adult life stage. Positive
se in expression level. The protien name and

Expression Level Adult Stage (FPKN)	Change in Expression Level (FPKN)

439.17	-7425.24
75574.23	71971.62
62948.05	45603.954
237523.435	169046.382
2205.55	-40965.71
3490.07	-39777.98
82120.42	82002.28
26.09	-68797.52
9.57	-27166.54