RNA-Binding Proteins HuB, HuC, and HuD are Distinctly Regulated in Dorsal Root Ganglia Neurons from STZ-Sensitive Compared to STZ-Resistant Diabetic Mice

1. Statistical analysis of glycemia changes

Supplementary Table 1. Two-way ANOVA analysis of the glycemia changes between diabetic, diabetic resistant and control groups

Overall tw-way ANOVA					
	DF	F value	Р		
Glycemia	7	60.01	P < 0.001		
Diabetic condition	2	636.85	P < 0.001		
Interaction	14	53.54	P < 0.001		
Post-hoc Bonferroni test	Post-hoc Bonferroni test				
	P				
Diabetic resistant vs Control	P < 0.001				
Diabetic vs Control	P < 0.001				
Diabetic vs Diabetic resistant	P < 0.001				

Supplementary Table 2. One-way ANOVA analysis – the weekly (Wk) analysis of the glycemia differences between the animal groups

Overall one-way ANOVA			
	DF	F value	Р
Wk0	2	4.08	P < 0.05
Post-hoc Bonferroni test			
	P		
Diabetic resistant vs Control	Ns		
Diabetic vs Control	ns		
Diabetic vs Diabetic resistant	P < 0.05		
Overall one-way ANOVA			
	DF	F value	Р
Wk1	2	6.12	P < 0.01
Post-hoc Bonferroni test			
	P		
Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.01		
Diabetic vs Diabetic resistant	ns		
Overall one-way ANOVA			
	DF	F value	Р
Wk2	2	22.87	P < 0.001
Post-hoc Bonferroni test			
	P		

Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	P < 0.001		
Overall one-way ANOVA			
	DF	F value	Р
Wk3	2	26.10	P < 0.001
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	P < 0.001		
Overall one-way ANOVA			
	DF	F value	P
Wk4	2	12.31	P < 0.001
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	P < 0.01		
Overall one-way ANOVA			
	DF	F value	Р
Wk5	2	673.74	P < 0.001
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	P < 0.001		
Overall one-way ANOVA	T		
	DF	F value	Р
Wk6	2	436.72	P < 0.001
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	ns		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	P < 0.001		
Overall one-way ANOVA	1		
	DF	F value	Р
Wk7	2	780.55	P < 0.001
Post-hoc Bonferroni test	T T		
	Р		
Diabetic resistant vs Control	P < 0.001		
Diabetic vs Control	P < 0.001		
Diabatia va Diabatia registant	P > 0.001		

Supplementary Table 3. One-way ANOVA analysis – the weekly comparison of the glycemia values for the diabetic group

Overall one-way ANOVA

	DF	 F value	P
Control group	7	5.41	ns
Post-hoc Bonferroni test			
	Р		
Wk1 vs Wk0	ns		
Wk2 vs Wk0	ns		
Wk2 vs Wk1	ns		
Wk3 vs Wk0	ns		
Wk3 vs Wk1	ns		
Wk3 vs Wk2	ns		
Wk4 vs Wk0	ns		
Wk4 vs Wk1	ns		
Wk4 vs Wk2	ns		
Wk4 vs Wk3	ns		
Wk5 vs Wk0	ns		
Wk5 vs Wk1	ns		
Wk5 vs Wk2	ns		
Wk5 vs Wk3	ns		
Wk5 vs Wk4	ns		
Wk6 vs Wk0	ns		
Wk6 vs Wk1	ns		
Wk6 vs Wk2	ns		
Wk6 vs Wk3	ns		
Wk6 vs Wk4	ns		
Wk6 vs Wk5	ns		
Wk7 vs Wk0	ns		
Wk7 vs Wk1	ns		
Wk7 vs Wk2	ns		
Wk7 vs Wk3	ns		
Wk7 vs Wk4	ns		
Wk7 vs Wk5	ns		
Wk7 vs Wk6	ns		
Overall one-way ANOVA			
	DF	F value	Р
Diabetic resistant group	7	1.88	ns
Post-hoc Bonferroni test			
	Р		
Wk1 vs Wk0	ns		
Wk2 vs Wk0	ns		
Wk2 vs Wk1	ns		
Wk3 vs Wk0	ns		
Wk3 vs Wk1	ns		
Wk3 vs Wk2	ns		
Wk4 vs Wk0	ns		
Wk4 vs Wk1	ns		
Wk4 vs Wk2	ns		
Wk4 vs Wk3	ns		
Wk5 vs Wk0	ns		

Wk5 vs Wk1	ns		
Wk5 vs Wk2	ns		
Wk5 vs Wk3	ns		
Wk5 vs Wk4	ns		
Wk6 vs Wk0	ns		
Wk6 vs Wk1	ns		
Wk6 vs Wk2	ns		
Wk6 vs Wk3	ns		
Wk6 vs Wk4	ns		
Wk6 vs Wk5	ns		
Wk7 vs Wk0	ns		
Wk7 vs Wk1	ns		
Wk7 vs Wk2	ns		
Wk7 vs Wk3	ns		
Wk7 vs Wk4	ns		
Wk7 vs Wk5	ns		
Wk7 vs Wk6	ns		
Overall one-way ANOVA			
	DF	F value	P
Diabetic group	7	40.22	P < 0.001
Post-hoc Bonferroni test			
	P		
Wk1 vs Wk0	ns		
Wk2 vs Wk0	ns		
Wk2 vs Wk1	ns		
Wk3 vs Wk0	ns		
Wk3 vs Wk1	ns		
Wk3 vs Wk2	ns		
Wk4 vs Wk0	ns		
Wk4 vs Wk1	ns		
Wk4 vs Wk2	ns		
Wk4 vs Wk3	ns		
Wk5 vs Wk0	P < 0.001		
Wk5 vs Wk1	P < 0.001		
Wk5 vs Wk2	P < 0.001		
Wk5 vs Wk3	P < 0.001		
Wk5 vs Wk4	P < 0.001		
Wk6 vs Wk0	P < 0.001		
Wk6 vs Wk1			
	P < 0.001		
Wk6 vs Wk2	$\begin{array}{c} P < 0.001 \\ P < 0.001 \end{array}$		
Wk6 vs Wk2 Wk6 vs Wk3	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \end{array}$		
Wk6 vs Wk2Wk6 vs Wk3Wk6 vs Wk4	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \end{array}$		
Wk6 vs Wk2 Wk6 vs Wk3 Wk6 vs Wk4 Wk6 vs Wk5	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ ns \end{array}$		
Wk6 vs Wk2Wk6 vs Wk3Wk6 vs Wk4Wk6 vs Wk5Wk7 vs Wk0	$\begin{array}{c c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ ns \\ P < 0.001 \\ \end{array}$		
Wk6 vs Wk2Wk6 vs Wk3Wk6 vs Wk4Wk6 vs Wk5Wk7 vs Wk0Wk7 vs Wk1	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ ns \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \end{array}$		
Wk6 vs Wk2 Wk6 vs Wk3 Wk6 vs Wk4 Wk6 vs Wk5 Wk7 vs Wk0 Wk7 vs Wk1 Wk7 vs Wk2	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ ns \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \end{array}$		
Wk6 vs Wk2 Wk6 vs Wk3 Wk6 vs Wk4 Wk6 vs Wk5 Wk7 vs Wk0 Wk7 vs Wk1 Wk7 vs Wk2 Wk7 vs Wk3	$\begin{array}{c} P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ P < 0.001 \\ ns \\ P < 0.001 \end{array}$		

Wk7 vs Wk5	ns
Wk7 vs Wk6	ns

2. Statistical analysis of the body weight changes

Supplementary Table 4. Two-way ANOVA analysis of the body weight changes between diabetic, diabetic resistant and control groups

Overall two-way ANOVA				
	DF	F value	Р	
Body weight	8	28.77	P < 0.001	
Diabetic condition	2	60.74	P < 0.001	
Interaction	16	2.70	P < 0.001	
Post-hoc Bonferroni test				
	Р			
Diabetic resistant vs Control	P < 0.001			
Diabetic vs Control	P < 0.001			
Diabetic vs Diabetic resistant	ns			

Supplementary Table 5. One-way ANOVA analysis – the weekly (Wk) analysis of the body weight differences between the animal groups

Overall one-way ANOVA				
	DF	F value	Ρ	
Wk0	2	0.64	ns	
Post-hoc Bonferroni test				
	P			
Diabetic resistant vs Control	ns			
Diabetic vs Control	ns			
Diabetic vs Diabetic resistant	ns			
Overall one-way ANOVA				
	DF	F value	Р	
Wk1	2	4.77	ns	
Post-hoc Bonferroni test				
	P			
Diabetic resistant vs Control	ns			
Diabetic vs Control	ns			
Diabetic vs Diabetic resistant	ns			
Overall one-way ANOVA				
	DF	F value	Р	
Wk2	2	3.34	ns	
Post-hoc Bonferroni test				
	Р			
Diabetic resistant vs Control	ns			
Diabetic vs Control	ns			
Diabetic vs Diabetic resistant	ns			

Overall one-way ANOVA			
	DF	F value	P
Wk3	2	5.22	P < 0.05
Post-hoc Bonferroni test			
ï	P		
Diabetic resistant vs Control	P < 0.05		
Diabetic vs Control	ns		
Diabetic vs Diabetic resistant	ns		
Overall one-way ANOVA			
<u>/</u> /	DF	F value	Р
Wk4	2	10.96	P < 0.001
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	P < 0.001		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	ns		
Overall one-way ANOVA	115		
Gverau one-way ANOVA	DF	F value	P
Wk5	2	10 70	$\mathbf{P} > 0.001$
Post has Ponfarrani test	<u>ک</u>	17./7	r < 0.001
Post-noc Bonjerroni lest	D		
Dishatia majatant wa Cantral	\mathbf{r}		
Diabetic resistant vs Control	P < 0.001		
Diabetic vs Control	P < 0.001		
Diabetic vs Diabetic resistant	Ns		
Overall one-way ANOVA	DE		
	DF	F value	P
WK6	2	10.86	P < 0.001
Post-hoc Bonferroni test			
	P		
Diabetic resistant vs Control	P < 0.001		
Diabetic vs Control	P < 0.05		
Diabetic vs Diabetic resistant	ns		
Overall one-way ANOVA	1	1	
	DF	F value	P
Wk7	2	13.71	P < 0.001
Post-hoc Bonferroni test			
	P		
Diabetic resistant vs Control	P < 0.001		
Diabetic vs Control	P < 0.01		
Diabetic vs Diabetic resistant	Ns		
Overall one-way ANOVA			
	DF	F value	P
Wk8	2	9.94	P < 0.001
Post-hoc Bonferroni test			
	P		
Diabetic resistant vs Control	P < 0.01		
Diabetic vs Control	P < 0.05		
Diabetic vs Diabetic resistant	ns		
	·		

Supplementary Table 6. One-way ANOVA analysis – the weekly comparison of the body weight values for the control group, diabetic resistant group and diabetic group

Overall one-way ANOVA			
	DF	F value	Р
Control group	8	56.96	P < 0.001
Post-hoc Bonferroni test			
	Р		
Wk1 vs Wk0	P < 0.001		
Wk2 vs Wk0	P < 0.001		
Wk2 vs Wk1	ns		
Wk3 vs Wk0	P < 0.001		
Wk3 vs Wk1	ns		
Wk3 vs Wk2	ns		
Wk4 vs Wk0	P < 0.001		
Wk4 vs Wk1	P < 0.001		
Wk4 vs Wk2	P < 0.001		
Wk4 vs Wk3	ns		
Wk5 vs Wk0	P < 0.001		
Wk5 vs Wk1	P < 0.001		
Wk5 vs Wk2	P < 0.001		
Wk5 vs Wk3	P < 0.001		
Wk5 vs Wk4	ns		
Wk6 vs Wk0	P < 0.001		
Wk6 vs Wk1	P < 0.001		
Wk6 vs Wk2	P < 0.001		
Wk6 vs Wk3	P < 0.001		
Wk6 vs Wk4	P < 0.001		
Wk6 vs Wk5	ns		
Wk7 vs Wk0	P < 0.001		
Wk7 vs Wk1	P < 0.001		
Wk7 vs Wk2	P < 0.001		
Wk7 vs Wk3	P < 0.001		
Wk7 vs Wk4	P < 0.001		
Wk7 vs Wk5	ns		
Wk7 vs Wk6	ns		
Wk8 vs Wk0	P < 0.001		
Wk8 vs Wk1	P < 0.001		
Wk8 vs Wk2	P < 0.001		
Wk8 vs Wk3	P < 0.001		
Wk8 vs Wk4	P < 0.001		
Wk8 vs Wk5	ns		
Wk8 vs Wk6	ns		
Wk8 vs Wk7	ns		
Overall one-way ANOVA	T		
	DF	F value	P

Diabetic resistant group	8		5.26	P < 0.001
Post-hoc Bonferroni test				
	P			
Wk1 vs Wk0	ns	l		
Wk2 vs Wk0	ns	l		
Wk2 vs Wk1	ns	l		
Wk3 vs Wk0	ns	l		
Wk3 vs Wk1	ns	l		
Wk3 vs Wk2	ns	l		
Wk4 vs Wk0	ns	l		
Wk4 vs Wk1	ns	l		
Wk4 vs Wk2	ns	l		
Wk4 vs Wk3	ns	l		
Wk5 vs Wk0	ns	l		
Wk5 vs Wk1	ns	l		
Wk5 vs Wk2	ns	l		
Wk5 vs Wk3	ns	l		
Wk5 vs Wk4	ns	l		
Wk6 vs Wk0	P < 0.05	l		
Wk6 vs Wk1	ns	l		
Wk6 vs Wk2	ns	l		
Wk6 vs Wk3	ns	l		
Wk6 vs Wk4	ns	l		
Wk6 vs Wk5	ns	l		
Wk7 vs Wk0	P < 0.01	l		
Wk7 vs Wk1	ns	l		
Wk7 vs Wk2	ns	l		
Wk7 vs Wk3	ns	l		
Wk7 vs Wk4	ns	l		
Wk7 vs Wk5	ns	l		
Wk7 vs Wk6	ns	l		
Wk8 vs Wk0	P < 0.001	l		
Wk8 vs Wk1	P < 0.01	l		
Wk8 vs Wk2	P < 0.05	l		
Wk8 vs Wk3	ns	l		
Wk8 vs Wk4	ns	l		
Wk8 vs Wk5	ns	l		
Wk8 vs Wk6	ns	l		
Wk8 vs Wk7	ns			
Overall one-way ANOVA				
	DF		F value	P
Diabetic group	8		3.44	 P < 0.01
Post-hoc Bonferroni test				
	Р			
Wk1 vs Wk0	ns	l		
Wk2 vs Wk0	ns	l		
Wk2 vs Wk1	ns	l		
Wk3 vs Wk0	ns	l		

Wk3 vs Wk1	ns
Wk3 vs Wk2	ns
Wk4 vs Wk0	ns
Wk4 vs Wk1	ns
Wk4 vs Wk2	ns
Wk4 vs Wk3	ns
Wk5 vs Wk0	ns
Wk5 vs Wk1	ns
Wk5 vs Wk2	ns
Wk5 vs Wk3	ns
Wk5 vs Wk4	ns
Wk6 vs Wk0	ns
Wk6 vs Wk1	ns
Wk6 vs Wk2	ns
Wk6 vs Wk3	ns
Wk6 vs Wk4	ns
Wk6 vs Wk5	ns
Wk7 vs Wk0	P < 0.05
Wk7 vs Wk1	ns
Wk7 vs Wk2	ns
Wk7 vs Wk3	ns
Wk7 vs Wk4	ns
Wk7 vs Wk5	ns
Wk7 vs Wk6	ns
Wk8 vs Wk0	P < 0.01
Wk8 vs Wk1	ns
Wk8 vs Wk2	ns
Wk8 vs Wk3	ns
Wk8 vs Wk4	ns
Wk8 vs Wk5	ns
Wk8 vs Wk6	ns

3. Statistical analysis for nociceptive hot thermal stimulation changes

Supplementary Table 7. Two-way ANOVA analysis of the paw withdrawal latency changes between diabetic, diabetic resistant and control groups

Overall two-way ANOVA					
	DF	F value	Р		
Latency	1	25.18	P < 0.001		
Diabetic condition	2	28.70	P < 0.001		
Interaction	2	22.94	P < 0.001		
Post-hoc Bonferroni test					
	Р				
Diabetic resistant vs Control	ns				
Diabetic vs Control	P < 0.001				
Diabetic vs Diabetic resistant	P < 0.001				

Supplementary Table 8. One-way ANOVA analysis of the final paw withdrawal latency (Lf) changes between diabetic, diabetic resistant and control groups

Overall one-way ANOVA					
	DF	F value	Р		
Final latency (Lf)	2	39.38	P < 0.001		
Post-hoc Bonferroni test					
	Р				
Diabetic resistant vs Control	ns				
Diabetic vs Control	P < 0.001				
Diabetic vs Diabetic resistant	P < 0.001				

4. Statistical analysis for Elav-like gene expression changes determined by qRT-PCR

Supplementary Table 9. Two-way ANOVA analysis of the *Elav*-like gene expression changes between diabetic, diabetic resistant and control groups

Overall two-way ANOVA						
	DF	F value	Р			
Elav-like gene expression	2	15.01	P < 0.001			
Diabetic condition	2	87.93	P < 0.001			
Interaction	4	8.09	P < 0.01			
Post-hoc Bonferroni test						
	P					
Diabetic resistant vs Control	P < 0.001					
Diabetic vs Control	P < 0.01					
Diabetic vs Diabetic resistant	P < 0.001					
	P					
Elavl3 vs Elavl2	P < 0.05					
Elavl4 vs Elavl2	ns					
Elavl4 vs Elavl3	P < 0.001					

Supplementary Table 10. One-way ANOVA analysis of the expression changes of each *Elav*-like gene between diabetic, diabetic resistant and control groups

Overall one-way ANOVA					
	DF		F value	Р	
Elavl2	2		36.78	P < 0.01	
Post-hoc Bonferroni test					
	Р				
Diabetic resistant vs Control	P < 0.05				
Diabetic vs Control	P < 0.05				
Diabetic vs Diabetic resistant	ns				
Overall one-way ANOVA					
	DF		F value	Р	
Elavl3	2		63.77	P < 0.001	
Post-hoc Bonferroni test					
	P				
Diabetic resistant vs Control	P < 0.001				

Diabetic vs Control	P < 0.05		
Diabetic vs Diabetic resistant	P < 0.05		
Overall one-way ANOVA			
	DF	F value	Р
Elavl4	2	26.47	P < 0.01
Post-hoc Bonferroni test			
	Р		
Diabetic resistant vs Control	P < 0.05		
Diabetic vs Control	ns		
Diabetic vs Diabetic resistant	P < 0.01		

5. Statistical analysis of Hu proteins expression changes determined by semi-quantitative analysis of immunofluorescence data

Supplementary Table 11. Two-way ANOVA analysis of the Hu proteins expression changes between diabetic, diabetic resistant and control groups

Overall two-way ANOVA						
	DF	F value	Р			
Hu protein expression	2	188.10	P < 0.001			
Diabetic condition	2	40.45	P < 0.001			
Interaction	4	20.79	P < 0.001			
Post-hoc Bonferroni test						
	P					
Diabetic resistant vs Control	P < 0.001					
Diabetic vs Control	P < 0.001					
Diabetic vs Diabetic resistant	ns					
	P					
HuC vs HuB	P < 0.001					

P < 0.001

P < 0.001

HuD vs HuB

HuD vs HuC

Supplementary Table 12. One-way ANOVA analysis of the expression changes for each Hu protein between diabetic, diabetic resistant and control groups

Overall one-way ANOVA						
	DF		F value	P		
HuB	2		33.26	P < 0.01		
Post-hoc Bonferroni test						
	Р					
Diabetic resistant vs Control	P < 0.001					
Diabetic vs Control	P < 0.01					
Diabetic vs Diabetic resistant	P < 0.001					
Overall one-way ANOVA						
	DF		F value	Р		
HuC	2		7.12	P < 0.01		
Post-hoc Bonferroni test						
	P					

Diabetic resistant vs Control	P < 0.01			
Diabetic vs Control	ns			
Diabetic vs Diabetic resistant	ns			
Overall one-way ANOVA				
	DF		F value	Р
HuD	2		10.15	P < 0.01
Post-hoc Bonferroni test				
	Р			
Diabetic resistant vs Control	P < 0.01			
Diabetic vs Control	P < 0.05			
Diabetic vs Diabetic resistant	ns			