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(54) Title: COMPOSITIONS AND METHODS FOR NEUROLOGICAL DISEASES

FIG. 1A

Name	Amino Acid Mutation(s) in SEQ ID NO: 33	Acetylcholine									
		10 uM ach	30 uM ach	50 uM ach	100 uM ach	300 uM ach	500 uM ach	1 mM ach	3 mM ach	5 mM ach	10 mM ach
CODA71	-	15.61	63.31	23.16	24.94	68.94	62.78	74.24	76.27	77.15	77.90
CODA75	SEQ ID NO: 29	-12.88	-18.67	-0.29	-14.46	-16.31	-17.41	-16.46	-12.38	-20.88	-8.69
CODA217	W77F	-5.86			76.06			68.74	73.45		
CODA109	S170T	82.91	82.53	82.11	83.68			69.89	78.12		
CODA236	R101F	-18.24			60			66.07	71.38		
CODA237	R101M	-16.79			-18.63			46.28	69.31		
CODA238	R101W	-16.58			75.13			78.99	75.74		
CODA282	Y115D	6.81			1.19			-14.05	2.37		
CODA283	Y115E_N379K	-6.16			-11.12			-2.74	53.61		
CODA325	L131G	5.66			74.07			62.65	69.49		
CODA326	L131A	7.43			73.57			71.8	74.49		
CODA330	L131F	11.07			43.34			77.52	73.89		
CODA333	L131S	-10.11			-10.05			32.11	57.37		
CODA334	L131Q	-2.63	30.06		71.27			79.66	74.9		
CODA335	L131T	-9.13			-9.29			0.57	35.37		
CODA339	L131D	4.56			10.19			77.34	77.79		
CODA340	L131E	15.29	66.56		81.31			80.77	77.31		
CODA342	L131R	-2.57			-3.18			78.98	75.75		
CODA337	L131N	28.32			81.8			71.23	73.7		
CODA945	Q139E	-1.25			71.21			71.79	76.04		
CODA377	S172D	-3.19			0.07			71.7	76.95		
CODA405	Y210V	-6.31			-14.48			-2.82	1.06		
CODA407	Y210F	-3.75			-1.6			71.65	79.09		
CODA409	Y210W	-5.43			17.14			78.84	78.55		

(57) Abstract: Compositions and methods are provided for modulating the activity of cells using engineered receptors, polynucleotide encoded engineered receptors, and gene therapy vectors comprising polynucleotides encoding engineered receptors. These compositions and methods find particular use in modulating the activity of neurons, for example in the treatment of disease or in the study of neuronal circuits.

[Continued on next page]

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