Murthy et al., http://www.jgp.org/cgi/content/full/jgp.201210786/DC1

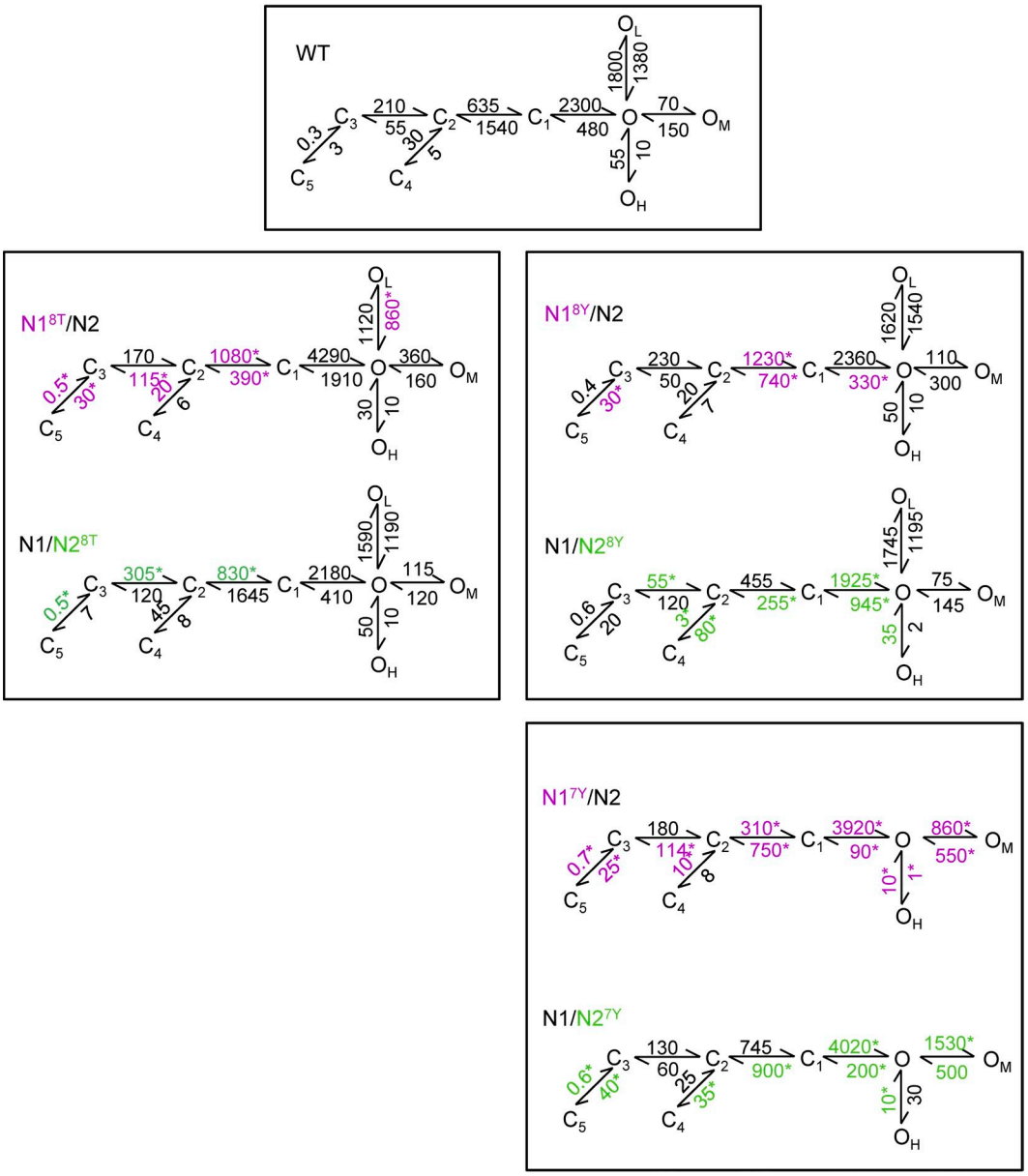

Figure S1. Reaction mechanism of NMDA receptors with lurcher and lurcher-like mutations obtained from fits with the indicated kinetic models. The connectivity of the open states is arbitrary; thus, the rate constants for these transitions have no mechanistic significance. Rate constants (s^{-1}) represent rounded averages of values estimated for each transition from fits to individual files in a given dataset. *, significant differences relative to WT ($P < 0.05$) in a Student's *t* test.

Table S1

Closed kinetic components for lurcher and lurcher-like N1/N2A receptors

	τ_{E1}	a_{E1} (%)	τ_{E2}	a_{E2} (%)	τ_{E3}	a_{E3} (%)	τ_{E4}	a_{E4} (%)	τ_{E5}	a_{E5} (%)	τ_{E6}	a_{E6} (%)
	ms		*ms*		*ms*		*ms*		*ms*		*ms*	
N1/N2	0.2 ± 0.01	36 ± 2	2.3 ± 0.1	37 ± 2	6 ± 0.2	20 ± 2	35 ± 2	1 ± 0.04	3,830 ± 270	0.16 ± 0.02		
$N1^{8T}$/N2	0.4 ± 0.03[a]	62 ± 5[a]	1.1 ± 0.1[a]	33 ± 5	6 ± 1	2 ± 0.4[a]	100 ± 30	0.3 ± 0.06[a]	3,269 ± 271	0.5 ± 0.1[a]		
$N1/N2^{8T}$	0.2 ± 0.01	30 ± 2	1.7 ± 0.2	38 ± 2	5 ± 0.4[a]	29 ± 4	26 ± 3	1 ± 0.3	2,242 ± 83[a]	0.33 ± 0.08		
$N1^{8Y}$/N2	0.3 ± 0.02[a]	38 ± 6	1.2 ± 0.07[a]	52 ± 4[a]	4 ± 0.5[a]	3 ± 1[a]	85 ± 32	0.2 ± 0.1[a]	2,803 ± 305	0.23 ± 0.07		
$N1/N2^{8Y}$	0.5 ± 0.02[a]	74 ± 3	2 ± 0.2	19 ± 2[a]	23 ± 5	2 ± 1	673 ± 170[a]	2 ± 0.5	4,583 ± 1139	1.3 ± 0.7		
$N1^{7Y}$/N2	0.2 ± 0.01	70 ± 3[a]	2.3 ± 0.3	13 ± 1[a]	9 ± 0.9	13 ± 2	200 ± 48[a]	1 ± 0.1	1,693 ± 81[a]	1.4 ± 0.3[a]		
−/−	0.3 ± 0.02[b]	38 ± 5[b]	2.9 ± 0.2	23 ± 2[b]	28 ± 6[b]	10 ± 1	174 ± 42[b]	4 ± 1[b]	2,550 ± 227[b]	9 ± 2[b]	9,010 ± 575	15 ± 4
−/Gly	0.2 ± 0.02	41 ± 2	1.5 ± 0.1[a]	40 ± 1	12 ± 3	9 ± 3	85 ± 16	4 ± 0.3[b]	1,093 ± 80[b]	4 ± 1[b]	7,480 ± 2,440	1 ± 0.5
$N1/N2^{7Y}$	0.2 ± 0.02	61 ± 6[a]	1.6 ± 0.2	31 ± 5	14 ± 3	4 ± 2[a]	292 ± 86[a]	1 ± 0.3	2,645 ± 351	0.8 ± 0.3		

[a]Significantly different from WT ($P < 0.05$; Student's *t* test).
[b]Significant difference relative to $N1^{7Y}$/N2 with Glu/Gly; $P < 0.05$ (Student's *t* test).

Table S2

Open kinetic components for lurcher and lurcher-like N1/N2A receptors

	τ_f	a_f (%)	τ_L	a_L (%)	τ_M	a_M (%)	τ_H	a_H (%)
	ms		*ms*		*ms*		*ms*	
N1/N2	0.3 ± 0.01	4 ± 0.3	4.4 ± 0.3	41 ± 5	11 ± 1	48 ± 4	20 ± 1	23 ± 9
(*n*)	(5)		(4)		(5)		(3)	
$N1^{8T}$/N2	0.6 ± 0.1[a]	5 ± 1	5.2 ± 0.4	50 ± 10	15 ± 2	48 ± 7	47 ± 8	25 ± 8
(*n*)	(11)		(7)		(12)		(8)	
$N1/N2^{8T}$	0.4 ± 0.03	4 ± 1	5.0 ± 0.8	30 ± 6	12 ± 1	54 ± 6	24 ± 1	19 ± 6
(*n*)	(7)		(5)		(7)		(5)	
$N1^{8Y}$/N2	0.3 ± 0.02	3 ± 0.2	4 ± 0.5	31 ± 10	9 ± 0.9	60 ± 9	23 ± 2	9 ± 6
(*n*)	(3)		(6)		(6)		(5)	
$N1/N2^{8Y}$	0.3 ± 0.01	8 ± 1[a]	4 ± 0.2	70 ± 7[a]	8 ± 0.5[a]	25 ± 6[a]	31 ± 6	1 ± 0.04
(*n*)	(7)		(7)		(6)		(3)	
$N1^{7Y}$/N2	0.6 ± 0.05[a]	1.4 ± 0.4[a]	ND	ND	60 ± 8[a]	83 ± 8[a]	111 ± 11[a]	13 ± 8
(*n*)	(5)				(5)		(5)	
−/−	0.6 ± 0.06	3 ± 1	ND	ND	50 ± 3	36 ± 17[b]	89 ± 8	75 ± 13[b]
(*n*)	(5)				(4)		(5)	
−/Gly	0.8 ± 0.1	1 ± 0.1	ND	ND	22 ± 4	55 ± 21	45 ± 11	63 ± 17
(*n*)	(3)				(3)		(5)	
$N1/N2^{7Y}$	0.5 ± 0.03[a]	4 ± 0.5	ND	ND	62 ± 8[a]	41 ± 7	150 ± 20[a]	54 ± 7
(*n*)	(5)				(5)		(5)	

ND, not detected.
[a]Statistically different from WT ($P < 0.05$) in a Student's *t* test.
[b]Significant difference relative to $N1^{7Y}$/N2 with Glu/Gly; $P < 0.05$ (Student's *t* test).