SUPPLEMENTARY DATA

TABLE 1. Mean EC_{50}/IC_{50} values and Hill coefficients for ligand action at different nAChR subtypes.

$^{86}Rb^{+}$ efflux assays were conducted as described in Methods and in the legends to Figs. 2-5 for cells expressing the indicated nAChR subtypes and for the ligands listed in column 1. **Agonism:** Results for agonism were fit to the logistic equation to determine mean nanomolar EC_{50} values (upper values; see SE for log molar EC_{50} values in TABLE 1), mean nanomolar IC_{50} values (upper values in parentheses; see SE for log molar IC_{50} values in TABLE 1) for drugs also displaying self-inhibition) and Hill coefficients (± SE) for agonism (middle values) or self inhibition when present (lower values in parentheses). **Inactivation:** Results for inactivation of responses mediated by a standard agonist were fit to the logistic equation to determine mean nanomolar IC_{50} values (upper values; see SE for log molar values in TABLE 1) and Hill coefficients (± SE; lower values).

Drug	Agonism nM EC50 value (nM IC_{50} self inhibition values) Hill coefficient for agonism ± SE (Hill coefficient for for self inhibition ± SE)				Inactivation nM IC_{50} value Hill coefficient for antagonism ± SE			
	α4β2	α4β4	α3β4*	α1*	α4β2	α4β4	α3β4*	α1*
	5.8	25 (25,000)	340	2200	4.8	29	600	2500
7	2.38 ± 0.31	1.47 ± 0.39 (-1.31 ± 0.90)	1.28 ± 0.22	1.91 ± 0.31	-2.15 ± 0.48	-1.56 ± 0.04	-0.91 ± 0.28	-1.22 ± 0.14
	9.8 (8900)	40 (72,000)	810 (7100)	1000 (13,000)	8.9	32	1300	870
16	2.24 ± 0.24 (-2.04 ± 1.99)	1.74 ± 0.49 (-0.45 ± 0.63)	2.47 ± 0.51 (-3.34 ± 0.79)	1.88 ± 0.15 (-2.50 ± 0.50)	-1.18 ± 0.14	-1.69 ± 0.11	-1.40 ± 0.31	-1.40 ± 0.15
	30 (5500)	150 (3500)	>>10,000	490 (3300)	180	120	620	370
18	2.36 ± 0.48 (-1.98 ± 0.41)	1.70 ± 0.13 (-1.55 ± 0.13)	-	4.97 ± 2.24 (-3.17 ± 1.33)	-0.47 ± 0.05	-1.66 ± 0.23	-1.23 ± 0.27	-1.49 ± 0.21
	76	690 (45,000)	>>10,000	>>10,000	690	1000	1100	2800
13	2.25 ± 0.08	2.44 ± 0.69 (-2.53 ± 2.67)	-	-	-0.59 ± 0.15	-1.13 ± 0.10	-1.40 ± 0.39	-0.93 ± 0.17
	74 (7100)	330 (4800)	>>10,000	>>10,000	580 {>10,000}	220	790	760
20	2.34 ± 0.46 (-1.56 ± 0.39)	1.56 ± 0.17 (-1.60 ± 0.23)	-	-	-0.56 ± 0.04	-1.68 ± 0.33	-2.10 ± 0.59	-1.53 ± 0.20
	87	680 (7100)	>>10,000	>>10,000	650	390	890	1800
10	2.07 ± 0.08	1.27 ± 0.08 (-1.67 ± 0.18)	-	-	-0.66 ± 0.10	-1.33 ± 0.17	-1.74 ± 0.26	-1.54 ± 0.11
	110	1900	>>10,000	>>10,000	5500	1200	4100	15,000
11	2.38 ± 1.40	1.00 ± 0.27	-	-	-0.63 ± 0.04	-1.25 ± 0.19	-1.55 ± 0.36	-1.33 ± 0.35
1	300 1.00 ± 0.10	ND -	ND -	ND -	430 -0.81 ± 0.09	ND -	ND -	ND -
	380	320 (3200)	>>10,000	>>10,000	4600	410	830	850
12	2.87 ± 2.01	1.46 ± 0.24 (-1.19 ± 0.57)	-	-	-1.65 ± 0.13	-1.44 ± 0.20	-1.80 ± 0.24	-1.82 ± 0.20
	>>10,000	>>10,000	>>10,000	>>10,000	>>10,000	ND	>>10,000	>>10,000
26	-	-	-	-	-	-	-	-