Table S9. *SL-E rate constant sensitivities (fluxes) with magnitudes greater than 1.*

	V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9	V_{10}	V_{11}	V_{12}	V_{13}	V_{14}	V_{15}	V_{16}
α_1	---	---	---	2.88	1.46	3.56	---	1.26	---	---	---	---	---	---	---	---
α_2	---	---	---	2.89	1.46	3.57	---	1.27	---	---	---	---	---	---	---	---
α_3	---	---	1.03	---	---	---	---	1.66	---	---	---	---	---	---	---	---
α_4	---	---	---	1.00	---	---	---	---	---	---	---	---	---	---	---	---
α_5	---	---	---	---	1.12	1.49	---	---	---	---	---	---	---	---	---	---
α_6	---	---	---	---	---	1.03	---	---	---	---	---	---	---	---	---	---
α_7	---	---	---	---	---	---	1.06	1.06	---	---	---	---	---	---	---	---
α_8	---	---	---	---	---	---	---	1.47	---	---	---	---	---	---	---	---
α_9	---	---	---	---	---	---	---	---	1.95	3.05	---	---	---	---	---	---
α_{10}	---	---	---	---	---	---	---	---	---	1.97	---	---	---	---	---	---
α_{11}	---	---	---	---	---	---	---	---	2.29	3.58	1.97	---	---	---	---	---
α_{12}	---	---	---	---	---	---	---	1.24	2.41	3.76	2.04	1.01	---	---	---	---
α_{13}	1.03	1.03	---	3.00	1.52	3.71	---	1.31	---	---	---	---	1.00	---	---	---
α_{14}	---	---	---	---	---	---	---	---	---	---	---	---	---	1.00	---	---
α_{15}	---	---	---	---	---	---	---	1.68	---	---	---	---	---	---	---	---
α_{16}	---	---	---	---	---	---	---	1.84	---	-1.64	---	---	---	---	1.00	1.00
α_{23}	---	---	---	-1.81	---	-2.86	---	---	---	---	---	---	---	---	---	---
α_{24}	---	---	---	-3.95	-1.87	-6.28	---	---	---	---	---	---	---	---	---	---
α_{25}	---	---	---	-2.57	-1.22	-4.10	---	1.48	---	---	---	---	---	---	---	---
α_{38}	---	---	---	-1.71	---	-2.72	---	---	---	---	---	---	---	---	---	---

Table S9 (cont...).

	V_{17}	V_{18}	V_{19}	V_{20}	V_{21}	V_{22}	V_{23}	V_{24}	V_{25}	V_{26}	V_{27}	V_{28}	V_{29}	V_{30}	V_{31}	V_{32}
α_1	3.54	1.01	---	---	---	---	---	---	---	---	---	---	---	---	---	-1.28
α_2	3.55	1.01	---	---	---	---	---	---	---	---	---	---	---	---	---	-1.28
α_3	---	1.42	---	1.51	1.23	---	---	---	---	---	---	---	---	---	---	---
α_5	1.47	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
α_6	1.01	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
α_8	---	1.25	---	1.35	1.06	---	---	---	---	---	---	---	---	---	---	---
α_{12}	---	1.07	---	1.20	---	---	---	---	---	---	---	---	---	---	---	---
α_{13}	3.70	1.04	---	---	---	---	---	---	---	---	---	---	---	---	---	-1.34
α_{15}	---	1.09	1.73	1.52	---	1.00	---	---	---	---	---	---	---	---	---	---
α_{16}	---	1.23	1.81	1.62	---	---	---	---	---	---	---	---	---	---	---	---
α_{18}	---	1.47	1.04	---	1.26	---	---	---	---	---	---	---	---	---	---	---
α_{19}	---	---	1.24	---	---	---	---	---	---	---	---	---	---	---	---	---
α_{20}	---	---	---	1.43	---	---	---	---	---	---	---	---	---	---	---	---
α_{21}	---	---	---	---	1.44	---	---	---	---	---	---	---	---	---	---	---
α_{22}	---	---	---	---	---	1.21	---	---	---	---	---	---	---	---	---	---
α_{23}	-2.84	---	---	1.08	1.04	---	---	---	---	---	---	---	---	---	---	1.30
α_{24}	-6.24	---	---	1.78	1.69	1.47	---	---	---	1.29	1.29	1.29	1.29	1.31	1.37	1.90
α_{25}	-4.07	1.55	1.23	3.84	3.78	3.63	---	---	1.00	3.50	3.50	3.50	3.50	3.54	3.71	5.14
α_{26}	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.35
α_{27}	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.35
α_{28}	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.35
α_{29}	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.35
α_{30}	---	---	---	1.00	---	---	---	---	---	---	---	---	---	---	1.02	1.41
α_{31}	---	---	---	1.09	1.08	1.06	---	---	---	---	---	---	---	---	1.11	1.53
α_{32}	---	---	---	1.94	1.92	1.89	---	---	---	---	---	---	---	---	---	2.72
α_{36}	---	---	---	1.56	1.55	1.52	---	---	---	---	---	---	---	---	---	2.19
α_{38}	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.11
α_{39}	-2.71	1.03	---	2.55	2.51	2.41	---	---	---	2.33	2.33	2.33	2.33	2.35	2.47	3.42

Table S9 (cont...).

	V_{33}	V_{34}	V_{35}	V_{36}	V_{37}	V_{38}	V_{39}	V_{40}
α_1	-1.10	-1.31	-2.62	-1.16	---	---	-1.76	-3.79
α_2	-1.10	-1.31	-2.63	-1.17	---	---	-1.77	-3.80
α_3	---	---	---	---	1.49	---	---	---
α_8	---	---	---	---	1.32	---	---	---
α_{12}	1.03	1.06	1.93	---	1.31	---	---	2.79
α_{13}	-1.16	-1.38	-2.77	-1.23	---	---	-1.84	-4.00
α_{23}	1.10	1.30	2.62	1.97	2.13	---	1.78	3.78
α_{24}	1.63	1.94	3.88	2.97	3.31	---	2.60	5.60
α_{25}	4.41	5.23	10.48	7.56	8.00	---	7.03	15.13
α_{26}	1.16	1.37	2.75	1.96	2.06	---	1.85	3.97
α_{27}	1.16	1.37	2.75	1.96	2.06	---	1.85	3.97
α_{28}	1.16	1.37	2.75	1.96	2.06	---	1.85	3.97
α_{29}	1.16	1.37	2.75	1.96	2.06	---	1.85	3.97
α_{30}	1.20	1.43	2.87	2.05	2.15	---	1.93	4.14
α_{31}	---	1.56	3.12	2.23	2.33	---	2.09	4.50
α_{32}	---	---	5.54	3.95	4.14	---	3.72	8.00
α_{33}	1.05	---	---	---	---	---	---	---
α_{34}	---	1.19	---	---	---	---	---	---
α_{35}	---	---	4.68	---	---	---	---	6.75
α_{36}	---	---	4.46	6.34	5.53	---	5.03	6.44
α_{37}	---	---	2.27	2.95	3.26	---	2.57	3.27
α_{38}	2.93	3.48	6.97	5.02	5.32	1.00	4.67	10.06
α_{39}	---	---	4.46	4.76	4.43	---	5.01	6.44
α_{40}	---	---	2.34	---	---	---	---	4.38