

Supplementary Material

Elucidation of the Mechanisms for the Underlying Depolarization and Reversibility by Photoactive Molecule

Tomohiro Numata^a Ryosuke Fukuda^b Mitsuru Hirano^c Kazuma Yamaguchi^{c,d} Kaori Sato-
Numata^{a,e} Hiroshi Imahori^{f,g} Tatsuya Murakami^b

^aDepartment of Physiology, School of Medicine, Fukuoka University, Fukuoka, Japan, ^bDepartment of Biotechnology, Graduate School of Engineering, Toyama Prefectural University, Toyama, Japan, ^cDepartment of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan, ^dHiroshima Regional Taxation Bureau, Hiroshima, Japan, ^eJapan Society for the Promotion of Science, Tokyo, Japan, ^fDepartment of Molecular Engineering, Graduate School of Engineering, Kyoto University, Kyoto, Japan, ^gInstitute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, Sakyo-ku, Kyoto, Japan

Supplemental Information, Table S1. Primer sequences used in RT-PCR experiments

Species	Genes	Primer sequences (5'→ 3')	Predicted lengths of PCR products (bp)
rat	Kv1.1	for: TCGGCCGCTCCAGGTCACCC	581
	NM_173095.3	rev: ATCGATGCGGTGAATGGTGC	
rat	Kv1.2	for: GCTACCGGAGACCCAGTGGGA	583
	NM_012970.3	rev: CCACCATGCATGTCTCTCGTT	
rat	Kv1.3	for: TATGGTGATATGCACCCAGTGAC	462
	M30312.1	rev: ATCAAGGGCATAACAGACCAAG	
rat	Kv1.4	for: TGCAACAGCCACATGCCTTA	485
	NM_012971.2	rev: ACTGTAGCGGACTGAACTGT	
rat	Kv1.5	for: GCCATGACCCCTCAGAGGAGG	293
	NM_012972.1	rev: GTGATGGAGTGACCCCTGCAT	
rat	Kv1.6	for: ACTCGCTCTCCCTAGCATC	454
	NM_023954.1	rev: TGAGCATGAGAAGGAAGCC	
rat	Kv1.7	for: ATCTTGGGGCAGACACTGC	468
	NM_001108914.1	rev: GACCGTGGTCATGGTGACCAC	
rat	Kv1.8	for: TGGGGCTACTCATCTTCTTC	200
	NM_001191713.1	rev: GATTGTGGGTACACTGTGTG	
rat	Kv2.1	for: GGATCCCCGAAAAGGCCAG	395
	NM_013186.1	rev: GTTGGTCTCCGTGAGCCTCC	
rat	Kv2.2	for: GAGGTTAGCCAAAAGACTC	524
	NM_054000.2	rev: TTGCAAAGGACCTGGGGAAG	
rat	Kv3.1	for: CAAGGGGACGAGAGCGAGCG	449
	NM_012856.1	rev: GGTCATCTCCAGCTCGTCTC	
rat	Kv3.2	for: GCAAGCTCACCTACATTTTG	260
	NM_139216.1	rev: TCCATCAGAAGCGCACGTGT	
rat	Kv3.3	for: TCATCCACATCAGCAACAAG	584
	NM_053997.4	rev: ACATGTCACCATAGCCCAG	
rat	Kv3.4	for: TACCGCGGGCGCAAGTCGGG	516
	NM_001122776.1	rev: CATCGTCTCCAGCCTCGTGG	
rat	Kv4.1	for: GTGCCAAGAACGATGACGT	674
	NM_001105748.1	rev: GCTCCAAGGGCCTCACTGA	
rat	Kv4.2	for: AGAAAAAGGACTCAGGACGC	545
	NM_031730.2	rev: TATGTGGCCTGGGCTAGACC	
rat	Kv4.3	for: CCAGCCGACAAGAACAAGCG	406
	NM_001270962	rev: CGGAAGCTGAGGGAGGGCAT	
rat	Kv5.1	for: CCAGGCAGCCAGGACTCTGT	416
	NM_001169104.1	rev: GTCCAAGATGAGCTGCACCC	
rat	Kv6.1	for: ACCAGCGAGGGTCGCCTGAG	614
	NM_001106545.1	rev: GCTGTCTGCCATCTATTCT	
rat	Kv6.2	for: GTCTGCGCCGTCGCGAGGAGG	315
	NM_001107372.1	rev: CAGGCCACGCACACTGTCTCAACAC	
rat	Kv6.3	for: CGTGTCTATGGTGGTGTGT	148
	NM_133426	rev: ACCAGCCTATGCAGATAGCTT	
rat	Kv6.4	for: CTTGCCTCTCCATCCTCTTC	138
	NM_001107435.1	rev: ACACAGATGGTCTCCACCAC	
rat	Kv7.1	for: GCTCTGGCCACCGGACCCCT	434
	NM_032073.1	rev: GATGCGGCCGGACTCATTCA	
rat	Kv7.2	for: AGTGCGGATCAGAGTCTC	226
	NM_133322.1	rev: GCTCTGATGCTGACTTTGAGGC	
rat	Kv7.3	for: CAGCAAAGAACTCATCACCG	179
	NM_031597.4	rev: ATGGTGGCCAGTGTGATCAG	
rat	Kv7.4	for: CCTTCCAAGCAGCATCTG	379
	XM_001053765.5	rev: TTGATCCGCCCCAGCATATCCA	
rat	Kv7.5	for: GGAACCCAGCTGCCAACCTCAT	125
	NM_001134643.2	rev: CTTTCTGGTAGGGCTGCAG	
rat	Kv8.1	for: TCTGCAGCGAGGGCGAAGGG	394
	NM_021697.1	rev: TCTGAAGTATCTGTCCCTGC	
rat	Kv8.2	for: GCTACCAGCAGGTTGGCTG	187
	NM_001106370.1	rev: CAGGTGGTCTCTGGATAC	
rat	Kv9.1	for: ACAGCCGAAGAAAAGAAGC	402
	NM_053954.1	rev: AGCCAGGTTTTAATAACTGTG	
rat	Kv9.2	for: CTGCGATGACTACGACGATG	408
	NM_023966.1	rev: GATGAAAAGGACGCTGAAGAC	
rat	Kv9.3	for: ACCAGAAAAGCAATGATGTGAG	595
	NM_031778.2	rev: AGAGAGGAAGAGAAGCAGTAG	
rat	Kv10.1	for: ACCTCATCTATCACGCCGGG	323
	NM_031742.1	rev: TCACGTCTGATCTTCCGG	
rat	Kv10.2	for: GCCTGGCTGGTTCTGGACAG	370
	NM_133610.2	rev: CTGTACCAGATGCAGGCCAGC	
rat	Kv11.1	for: AACATGATTCTGGCTCCC	573
	NM_053949.1	rev: GGGTTTCCAGCCTGTTTCA	
rat	Kv11.2	for: CCCCAGGCCACCAAGACCCC	613
	NM_053937.1	rev: GGGTTTCCAGCCTGTTTCA	
rat	Kv11.3	for: ATCCCGAACACTCACTCTGAAC	872
	NM_131912.1	rev: GAAGGTAAAGTAAAGTGCCGTGAC	
rat	Kv12.1	for: CCCATTCTCAGCCCTTGTC	607
	NM_053630.1	rev: CCCTATCTCCACTGTCCC	
rat	Kv12.2	for: TGGGGAGCAAGGACACACGA	771
	NM_017108.1	rev: TCAAGACTGAACCTGCTGGGG	
rat	Kv12.3	for: TTTCCCATAGTCTACTGTTCA	888
	NM_145095.2	rev: CAGCCGAACAGTCTTCAGA	