Marc Freichel

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 115
 6,052
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 papers
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 125
 6,896
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 5.15

 ext. papers
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 avg, IF
 L-index

#	Paper	IF	Citations
115	Lack of an endothelial store-operated Ca2+ current impairs agonist-dependent vasorelaxation in TRP4-/- mice. <i>Nature Cell Biology</i> , 2001 , 3, 121-7	23.4	492
114	Impairment of store-operated Ca2+ entry in TRPC4(-/-) mice interferes with increase in lung microvascular permeability. <i>Circulation Research</i> , 2002 , 91, 70-6	15.7	325
113	TRPC3 channels are required for synaptic transmission and motor coordination. <i>Neuron</i> , 2008 , 59, 392-	8 13.9	314
112	Voltage dependence of the Ca2+-activated cation channel TRPM4. <i>Journal of Biological Chemistry</i> , 2003 , 278, 30813-20	5.4	255
111	Trp12, a novel Trp related protein from kidney. FEBS Letters, 2000, 485, 127-34	3.8	243
110	Increased IgE-dependent mast cell activation and anaphylactic responses in mice lacking the calcium-activated nonselective cation channel TRPM4. <i>Nature Immunology</i> , 2007 , 8, 312-20	19.1	212
109	De novo expression of Trpm4 initiates secondary hemorrhage in spinal cord injury. <i>Nature Medicine</i> , 2009 , 15, 185-91	50.5	163
108	TRPM4 cation channel mediates axonal and neuronal degeneration in experimental autoimmune encephalomyelitis and multiple sclerosis. <i>Nature Medicine</i> , 2012 , 18, 1805-11	50.5	140
107	Activation of TRPC6 channels is essential for lung ischaemia-reperfusion induced oedema in mice. <i>Nature Communications</i> , 2012 , 3, 649	17.4	137
106	Isoform-specific inhibition of TRPC4 channel by phosphatidylinositol 4,5-bisphosphate. <i>Journal of Biological Chemistry</i> , 2008 , 283, 10026-36	5.4	136
105	Deletion of TRPC4 and TRPC6 in mice impairs smooth muscle contraction and intestinal motility in vivo. <i>Gastroenterology</i> , 2009 , 137, 1415-24	13.3	134
104	TRPC3 and TRPC6 are essential for normal mechanotransduction in subsets of sensory neurons and cochlear hair cells. <i>Open Biology</i> , 2012 , 2, 120068	7	106
103	The Ca(2+) sensor stromal interaction molecule 1 (STIM1) is necessary and sufficient for the store-operated Ca(2+) entry function of transient receptor potential canonical (TRPC) 1 and 4 channels in endothelial cells. <i>Molecular Pharmacology</i> , 2012 , 81, 510-26	4.3	106
102	Increased catecholamine secretion contributes to hypertension in TRPM4-deficient mice. <i>Journal of Clinical Investigation</i> , 2010 , 120, 3267-79	15.9	106
101	Dicarbonyls and Advanced Glycation End-Products in the Development of Diabetic Complications and Targets for Intervention. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	104
100	Removal of Ca2+ channel beta3 subunit enhances Ca2+ oscillation frequency and insulin exocytosis. <i>Cell</i> , 2004 , 119, 273-84	56.2	100
99	Contribution of transient receptor potential channels to the control of GABA release from dendrites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 16065-70	11.5	97

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98	Canonical transient receptor channel 5 (TRPC5) and TRPC1/4 contribute to seizure and excitotoxicity by distinct cellular mechanisms. <i>Molecular Pharmacology</i> , 2013 , 83, 429-38	4.3	92
97	Critical role for the beta regulatory subunits of Cav channels in T lymphocyte function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 15529-34	11.5	89
96	Reduced cardiac L-type Ca2+ current in Ca(V)beta2-/- embryos impairs cardiac development and contraction with secondary defects in vascular maturation. <i>Circulation Research</i> , 2006 , 99, 749-57	15.7	84
95	TRPM4 regulates migration of mast cells in mice. <i>Cell Calcium</i> , 2009 , 45, 226-32	4	81
94	Murine ORAI2 splice variants form functional Ca2+ release-activated Ca2+ (CRAC) channels. <i>Journal of Biological Chemistry</i> , 2007 , 282, 19375-84	5.4	79
93	Male fertility depends on Call+ absorption by TRPV6 in epididymal epithelia. <i>Science Signaling</i> , 2011 , 4, ra27	8.8	76
92	Functional role of TRPC proteins in native systems: implications from knockout and knock-down studies. <i>Journal of Physiology</i> , 2005 , 567, 59-66	3.9	74
91	The Gq signalling pathway inhibits brown and beige adipose tissue. <i>Nature Communications</i> , 2016 , 7, 10895	17.4	73
90	A background Ca2+ entry pathway mediated by TRPC1/TRPC4 is critical for development of pathological cardiac remodelling. <i>European Heart Journal</i> , 2015 , 36, 2257-66	9.5	73
89	Heteromeric channels formed by TRPC1, TRPC4 and TRPC5 define hippocampal synaptic transmission and working memory. <i>EMBO Journal</i> , 2017 , 36, 2770-2789	13	72
88	Paradoxical block of parathormone secretion is mediated by increased activity of G alpha subunits. Journal of Biological Chemistry, 2001 , 276, 6763-9	5.4	69
87	Lung endothelial Ca2+ and permeability response to platelet-activating factor is mediated by acid sphingomyelinase and transient receptor potential classical 6. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2012 , 185, 160-70	10.2	66
86	The TRPV6 gene, cDNA and protein. <i>Cell Calcium</i> , 2003 , 33, 509-18	4	66
85	Heteromeric canonical transient receptor potential 1 and 4 channels play a critical role in epileptiform burst firing and seizure-induced neurodegeneration. <i>Molecular Pharmacology</i> , 2012 , 81, 384-92	4.3	63
84	Ca2+ entry via TRPC channels is necessary for thrombin-induced NF-kappaB activation in endothelial cells through AMP-activated protein kinase and protein kinase Cdelta. <i>Journal of Biological Chemistry</i> , 2009 , 284, 563-574	5.4	60
83	Heart rate contributes to the vascular effects of chronic mental stress: effects on endothelial function and ischemic brain injury in mice. <i>Stroke</i> , 2011 , 42, 1742-9	6.7	60
82	Novel insights into the mechanisms mediating the local antihypertrophic effects of cardiac atrial natriuretic peptide: role of cGMP-dependent protein kinase and RGS2. <i>Basic Research in Cardiology</i> , 2010 , 105, 583-95	11.8	60
81	A proteolytic fragment of histone deacetylase 4 protects the heart from failure by regulating the hexosamine biosynthetic pathway. <i>Nature Medicine</i> , 2018 , 24, 62-72	50.5	59

80	Transient receptor potential channels function as a coincidence signal detector mediating phosphatidylserine exposure. <i>Science Signaling</i> , 2013 , 6, ra50	8.8	58
79	Pain perception in mice lacking the beta3 subunit of voltage-activated calcium channels. <i>Journal of Biological Chemistry</i> , 2002 , 277, 40342-51	5.4	57
78	Increased 🖟 adrenergic inotropy in ventricular myocardium from Trpm4-/- mice. <i>Circulation Research</i> , 2014 , 114, 283-94	15.7	54
77	Store-operated cation channels in the heart and cells of the cardiovascular system. <i>Cellular Physiology and Biochemistry</i> , 1999 , 9, 270-83	3.9	53
76	NMDA receptor-dependent synaptic activation of TRPC channels in olfactory bulb granule cells. Journal of Neuroscience, 2012 , 32, 5737-46	6.6	51
75	The Role of TRP Proteins in Mast Cells. Frontiers in Immunology, 2012, 3, 150	8.4	51
74	Modulation of Ca2+ signaling by Na+/Ca2+ exchangers in mast cells. <i>Journal of Immunology</i> , 2005 , 174, 119-30	5.3	51
73	Defective survival of naive CD8+ T lymphocytes in the absence of the beta3 regulatory subunit of voltage-gated calcium channels. <i>Nature Immunology</i> , 2009 , 10, 1275-82	19.1	50
72	The Sur1-Trpm4 channel regulates NOS2 transcription in TLR4-activated microglia. <i>Journal of Neuroinflammation</i> , 2016 , 13, 130	10.1	49
71	Synaptobrevin2 is the v-SNARE required for cytotoxic T-lymphocyte lytic granule fusion. <i>Nature Communications</i> , 2013 , 4, 1439	17.4	49
70	Functional TRPV6 channels are crucial for transepithelial Ca2+ absorption. <i>American Journal of Physiology - Renal Physiology</i> , 2012 , 303, G879-85	5.1	49
69	Loss of Glyoxalase 1 Induces Compensatory Mechanism to Achieve Dicarbonyl Detoxification in Mammalian Schwann Cells. <i>Journal of Biological Chemistry</i> , 2017 , 292, 3224-3238	5.4	48
68	Excision of Trpv6 gene leads to severe defects in epididymal Ca2+ absorption and male fertility much like single D541A pore mutation. <i>Journal of Biological Chemistry</i> , 2012 , 287, 17930-41	5.4	47
67	Moderate calcium channel dysfunction in adult mice with inducible cardiomyocyte-specific excision of the cacnb2 gene. <i>Journal of Biological Chemistry</i> , 2011 , 286, 15875-82	5.4	44
66	Diversity and developmental expression of L-type calcium channel beta2 proteins and their influence on calcium current in murine heart. <i>Journal of Biological Chemistry</i> , 2009 , 284, 30129-37	5.4	42
65	The Ca(2+)-activated cation channel TRPM4 is a negative regulator of angiotensin II-induced cardiac hypertrophy. <i>Basic Research in Cardiology</i> , 2015 , 110, 43	11.8	40
64	A cardiac pathway of cyclic GMP-independent signaling of guanylyl cyclase A, the receptor for atrial natriuretic peptide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 18500-5	11.5	40
63	Mechanism of stretch-induced activation of the mechanotransducer zyxin in vascular cells. <i>Science Signaling</i> , 2012 , 5, ra91	8.8	39

62	TRPC4- and TRPC4-containing channels. Handbook of Experimental Pharmacology, 2014, 222, 85-128	3.2	34	
61	The transient receptor potential channel TRPV6 is dynamically expressed in bone cells but is not crucial for bone mineralization in mice. <i>Journal of Cellular Physiology</i> , 2012 , 227, 1951-9	7	33	
60	Variants That Affect Function of Calcium Channel TRPV6 Are Associated With Early-Onset Chronic Pancreatitis. <i>Gastroenterology</i> , 2020 , 158, 1626-1641.e8	13.3	32	
59	Specific detection and semi-quantitative analysis of TRPC4 protein expression by antibodies. <i>Pflugers Archiv European Journal of Physiology</i> , 2005 , 451, 81-6	4.6	30	
58	Regulation of the pleiotropic effects of tissue-resident mast cells. <i>Journal of Allergy and Clinical Immunology</i> , 2019 , 144, S31-S45	11.5	29	
57	The auxiliary subunit gamma 1 of the skeletal muscle L-type Ca2+ channel is an endogenous Ca2+ antagonist. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 17885-90	11.5	29	
56	Compensatory mechanisms for methylglyoxal detoxification in experimental & clinical diabetes. <i>Molecular Metabolism</i> , 2018 , 18, 143-152	8.8	28	
55	Altered inactivation of Ca2+ current and Ca2+ release in mouse muscle fibers deficient in the DHP receptor gamma1 subunit. <i>Journal of General Physiology</i> , 2004 , 124, 605-18	3.4	27	
54	Deletion of Orai2 augments endogenous CRAC currents and degranulation in mast cells leading to enhanced anaphylaxis. <i>Cell Calcium</i> , 2018 , 71, 24-33	4	24	
53	TRPM4-dependent post-synaptic depolarization is essential for the induction of NMDA receptor-dependent LTP in CA1 hippocampal neurons. <i>Pflugers Archiv European Journal of Physiology</i> , 2016 , 468, 593-607	4.6	23	
52	Increase in cytosolic Ca2+ produced by hypoxia and other depolarizing stimuli activates a non-selective cation channel in chemoreceptor cells of rat carotid body. <i>Journal of Physiology</i> , 2014 , 592, 1975-92	3.9	22	
51	The role of cGMP/cGKI signalling and Trpc channels in regulation of vascular tone. <i>Cardiovascular Research</i> , 2013 , 100, 280-7	9.9	19	
50	TRPC proteins contribute to development of diabetic retinopathy and regulate glyoxalase 1 activity and methylglyoxal accumulation. <i>Molecular Metabolism</i> , 2018 , 9, 156-167	8.8	18	
49	Crucial role of TRPC1 and TRPC4 in cystitis-induced neuronal sprouting and bladder overactivity. <i>PLoS ONE</i> , 2013 , 8, e69550	3.7	18	
48	Functional interaction between TRP4 and CFTR in mouse aorta endothelial cells. <i>BMC Physiology</i> , 2001 , 1, 3	O	17	
47	TPC1 deficiency or blockade augments systemic anaphylaxis and mast cell activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 18068-18078	11.5	17	
46	TRPC4/TRPC5 channels mediate adverse reaction to the cancer cell cytotoxic agent (-)-Englerin A. <i>Oncotarget</i> , 2018 , 9, 29634-29643	3.3	17	
45	Dual depolarization responses generated within the same lateral septal neurons by TRPC4-containing channels. <i>Pflugers Archiv European Journal of Physiology</i> , 2014 , 466, 1301-16	4.6	16	

44	TRPC4 and TRPC4-Deficient Mice. Novartis Foundation Symposium, 2008, 189-203		16
43	Lipid-independent control of endothelial and neuronal TRPC3 channels by light. <i>Chemical Science</i> , 2019 , 10, 2837-2842	9.4	14
42	Essential roles for CavI2 and Cav1 channels in thymocyte development and T cell homeostasis. <i>Science Signaling</i> , 2015 , 8, ra103	8.8	14
41	Maternal Transient Receptor Potential Vanilloid 6 (Trpv6) Is Involved In Offspring Bone Development. <i>Journal of Bone and Mineral Research</i> , 2019 , 34, 699-710	6.3	13
40	TRPC channels regulate Ca2+-signaling and short-term plasticity of fast glutamatergic synapses. <i>PLoS Biology</i> , 2019 , 17, e3000445	9.7	12
39	Adenylyl cyclase-mediated effects contribute to increased Isoprenaline-induced cardiac contractility in TRPM4-deficient mice. <i>Journal of Molecular and Cellular Cardiology</i> , 2014 , 74, 307-17	5.8	12
38	Does Erythropoietin Regulate TRPC Channels in Red Blood Cells?. <i>Cellular Physiology and Biochemistry</i> , 2017 , 41, 1219-1228	3.9	12
37	Novel Endothelial Cell-Specific AQP1 Knockout Mice Confirm the Crucial Role of Endothelial AQP1 in Ultrafiltration during Peritoneal Dialysis. <i>PLoS ONE</i> , 2016 , 11, e0145513	3.7	12
36	Odontoblast TRPC5 channels signal cold pain in teeth. Science Advances, 2021, 7,	14.3	12
35	Trpc5 deficiency causes hypoprolactinemia and altered function of oscillatory dopamine neurons in the arcuate nucleus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 15236-15243	11.5	11
34	Functional Characterization of Transient Receptor Potential (TRP) Channel C5 in Female Murine Gonadotropes. <i>Endocrinology</i> , 2017 , 158, 887-902	4.8	11
33	Ba2+ currents in inner and outer hair cells of mice lacking the voltage-dependent Ca2+ channel subunits beta3 or beta4. <i>Channels</i> , 2009 , 3, 366-76	3	11
32	Modulation of recombinant transient-receptor-potential-like (TRPL) channels by cytosolic Ca2+. <i>Pflugers Archiv European Journal of Physiology</i> , 2000 , 440, 409-17	4.6	11
31	Methylglyoxal evokes acute Ca transients in distinct cell types and increases agonist-evoked Ca entry in endothelial cells via CRAC channels. <i>Cell Calcium</i> , 2019 , 78, 66-75	4	10
30	TRPM4-mediated control of FcRI-evoked Ca(2+) elevation comprises enhanced plasmalemmal trafficking of TRPM4 channels in connective tissue type mast cells. <i>Scientific Reports</i> , 2016 , 6, 32981	4.9	9
29	Contractility Measurements on Isolated Papillary Muscles for the Investigation of Cardiac Inotropy in Mice. <i>Journal of Visualized Experiments</i> , 2015 ,	1.6	8
28	Ca2+ channel currents and contraction in CaVbeta3-deficient ileum smooth muscle from mouse. <i>Cell Calcium</i> , 2007 , 42, 477-87	4	8
27	Cardiomyocyte-Specific Deletion of Orai1 Reveals Its Protective Role in Angiotensin-II-Induced Pathological Cardiac Remodeling. <i>Cells</i> , 2020 , 9,	7.9	7

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26	Contribution of NAADP to Glutamate-Evoked Changes in Ca Homeostasis in Mouse Hippocampal Neurons. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 496	5.7	7	
25	Analysis of Mrgprb2 Receptor-Evoked Ca Signaling in Bone Marrow Derived (BMMC) and Peritoneal (PMC) Mast Cells of TRPC-Deficient Mice. <i>Frontiers in Immunology</i> , 2020 , 11, 564	8.4	7	
24	Saraf-dependent activation of mTORC1 regulates cardiac growth. <i>Journal of Molecular and Cellular Cardiology</i> , 2020 , 141, 30-42	5.8	6	
23	TRPM4 Modulates Right Ventricular Remodeling Under Pressure Load Accompanied With Decreased Expression Level. <i>Journal of Cardiac Failure</i> , 2020 , 26, 599-609	3.3	6	
22	TRPC channels are not required for graded persistent activity in entorhinal cortex neurons. <i>Hippocampus</i> , 2019 , 29, 1038-1048	3.5	5	
21	TRPC1/4/5 channels contribute to morphine-induced analgesic tolerance and hyperalgesia by enhancing spinal synaptic potentiation and structural plasticity. <i>FASEB Journal</i> , 2020 , 34, 8526-8543	0.9	5	
20	Cyclic regulation of Trpm4 expression in female vomeronasal neurons driven by ovarian sex hormones. <i>Molecular and Cellular Neurosciences</i> , 2020 , 105, 103495	4.8	5	
19	Angiotensin-II-Evoked Ca Entry in Murine Cardiac Fibroblasts Does Not Depend on TRPC Channels. <i>Cells</i> , 2020 , 9,	7.9	4	
18	RNA-seq analysis reveals TRPC genes to impact an unexpected number of metabolic and regulatory pathways. <i>Scientific Reports</i> , 2020 , 10, 7227	4.9	4	
17	Genetic background influences expression and function of the cation channel TRPM4 in the mouse heart. <i>Basic Research in Cardiology</i> , 2020 , 115, 70	11.8	4	
16	Enhancing mitochondrial activity in neurons protects against neurodegeneration in a mouse model of multiple sclerosis. <i>ELife</i> , 2021 , 10,	8.9	4	
15	Isolation of Peritoneum-derived Mast Cells and Their Functional Characterization with Ca2+-imaging and Degranulation Assays. <i>Journal of Visualized Experiments</i> , 2018 ,	1.6	3	
14	9-Phenanthrol enhances the generation of an CD8 T cell response following transcutaneous immunization with imiquimod in mice. <i>Journal of Dermatological Science</i> , 2017 , 87, 260-267	4.3	3	
13	TRPV4-Mediated Regulation of the Blood Brain Barrier Is Abolished During Inflammation. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 849	5.7	3	
12	Assessment of PEEP-Ventilation and the Time Point of Parallel-Conductance Determination for Pressure-Volume Analysis Under I-Adrenergic Stimulation in Mice. <i>Frontiers in Cardiovascular Medicine</i> , 2019 , 6, 36	5.4	2	
11	A Global Cndp1-Knock-Out Selectively Increases Renal Carnosine and Anserine Concentrations in an Age- and Gender-Specific Manner in Mice. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	2	
10	Development of an AAV9-RNAi-mediated silencing strategy to abrogate TRPM4 expression in the adult heart. <i>Pflugers Archiv European Journal of Physiology</i> , 2021 , 473, 533-546	4.6	2	
9	Boosting targeted genome editing using the hei-tag <i>ELife</i> , 2022 , 11,	8.9	2	

8	Emergent Temporal Signaling in Human Trabecular Meshwork Cells: Role of TRPV4-TRPM4 Interactions <i>Frontiers in Immunology</i> , 2022 , 13, 805076	8.4	2
7	Contribution of TRPC Channels in Neuronal Excitotoxicity Associated With Neurodegenerative Disease and Ischemic Stroke. <i>Frontiers in Cell and Developmental Biology</i> , 2020 , 8, 618663	5.7	1
6	Novel Nongenetic Murine Model of Hyperglycemia and Hyperlipidemia-Associated Aggravated Atherosclerosis <i>Frontiers in Cardiovascular Medicine</i> , 2022 , 9, 813215	5.4	1
5	Trophectoderm cell failure leads to peri-implantation lethality in Trpm7-deficient mouse embryos. <i>Cell Reports</i> , 2021 , 37, 109851	10.6	O
4	Transcriptional signatures regulated by TRPC1/C4-mediated Background Ca entry after pressure-overload induced cardiac remodelling. <i>Progress in Biophysics and Molecular Biology</i> , 2021 , 159, 86-104	4.7	0
3	Deep Metabolic Profiling Assessment of Tissue Extraction Protocols for Three Model Organisms <i>Frontiers in Chemistry</i> , 2022 , 10, 869732	5	O
2	L-type blocker STIMulate Ca entry in synthetic VSMCs. <i>Cell Calcium</i> , 2020 , 91, 102279	4	
1	Activity of Glyoxylase 1 is regulated by a glucose-responsive phosphorylation on Tyr136. <i>Molecular Metabolism</i> , 2021 , 101406	8.8	