Masataka Kawai

List of Publications by Year
in descending order

65	1,511	304368	329751
papers	citations	22 h-index	37 g-index

67	67	67	716
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Phosphate has dual roles in cross-bridge kinetics in rabbit psoas single myofibrils. Journal of General Physiology, 2021, 153, .	0.9	4
2	Mechanisms of Frank-Starling law of the heart and stretch activation in striated muscles may have a common molecular origin. Journal of Muscle Research and Cell Motility, 2021, 42, 355-366.	0.9	11
3	Hypertrophic cardiomyopathy associated E22K mutation in myosin regulatory light chain decreases calciumâ€activated tension and stiffness and reduces myofilament Ca²⁺ sensitivity. FEBS Journal, 2021, 288, 4596-4613.	2.2	5
4	Functional significance of HCM mutants of tropomyosin, V95A and D175N, studied with <i>in vitro</i> motility assays. Biophysics and Physicobiology, 2019, 16, 28-40.	0.5	6
5	Structure and Function of Muscle Cells. , 2018, , 33-64.		1
6	Nebulin increases thin filament stiffness and force per cross-bridge in slow-twitch soleus muscle fibers. Journal of General Physiology, 2018, 150, 1510-1522.	0.9	18
7	Mathematics Needed to Solve Problems of Contraction. , 2018, , 65-76.		4
8	Estimation of actomyosin active force maintained by tropomyosin and troponin complex under vertical forces in the in vitro motility assay system. PLoS ONE, 2018, 13, e0192558.	1.1	6
9	Computer Interfacing of Experimental Apparatus. , 2018, , 77-96.		0
10	How to Characterize Chemical Reactions Occurring in Muscle Fibers?. , 2018, , 23-31.		0
11	Reaction Processes (Chemical Kinetics) and Their Application to Muscle Biology. , 2018, , 9-22.		0
12	Myosin Rod Hypophosphorylation and CB Kinetics in Papillary Muscles from a TnC-A8V KI Mouse Model. Biophysical Journal, 2017, 112, 1726-1736.	0.2	10
13	Cardiac contractility, motor function, and crossâ€bridge kinetics in N47Kâ€•RLC mutant mice. FEBS Journal, 2017, 284, 1897-1913.	2.2	5
14	Development of apical hypertrophic cardiomyopathy with age in a transgenic mouse model carrying the cardiac actin E99K mutation. Journal of Muscle Research and Cell Motility, 2017, 38, 421-435.	0.9	4
15	Comparison of elementary steps of the cross-bridge cycle in rat papillary muscle fibers expressing Î±- and Î²-myosin heavy chain with sinusoidal analysis. Journal of Muscle Research and Cell Motility, 2016, 37, 203-214.	0.9	10
16	Editorial on EMC 2014 special issue. Journal of Muscle Research and Cell Motility, 2015, 36, 1-3.	0.9	1
17	High ionic strength depresses muscle contractility by decreasing both force per cross-bridge and the number of strongly attached cross-bridges. Journal of Muscle Research and Cell Motility, 2015, 36, 227-241.	0.9	12
18	The immediate effect of HCM causing actin mutants E99K and A230V on actinâ€“Tmâ€“myosin interaction in thin-filament reconstituted myocardium. Journal of Molecular and Cellular Cardiology, 2015, 79, 123-132.	0.9	17

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19	Using baculovirus/insect cell expressed recombinant actin to study the molecular pathogenesis of HCM caused by actin mutation A331P. Journal of Molecular and Cellular Cardiology, 2014, 74, 64-75.	0.9	17
20	Phosphorylation of cMyBP-C Affects Contractile Mechanisms in a Site-specific Manner. Biophysical Journal, 2014, 106, 1112-1122.	0.2	21
21	Characterizations of myosin essential light chainâ€™sÂN-terminal truncation mutant Î”43 in transgenic mouse papillary muscles by using tension transients in response to sinusoidal length alterations. Journal of Muscle Research and Cell Motility, 2013, 34, 93-105.	0.9	23
22	Diversity and similarity of motor function and cross-bridge kinetics in papillary muscles of transgenic mice carrying myosin regulatory light chain mutations D166V and R58Q. Journal of Molecular and Cellular Cardiology, 2013, 62, 153-163.	0.9	18
23	Analysis of the Molecular Pathogenesis of Cardiomyopathy-Causing cTnTÂMutants I79N, Î”E96, and Î”K210. Biophysical Journal, 2013, 104, 1979-1988.	0.2	9
24	A study of tropomyosinâ€™s role in cardiac function and disease using thin-filament reconstituted myocardium. Journal of Muscle Research and Cell Motility, 2013, 34, 295-310.	0.9	44
25	A re-interpretation of the rate of tension redevelopment (k TR) in active muscle. Journal of Muscle Research and Cell Motility, 2013, 34, 407-415.	0.9	14
26	DCM-Related Tropomyosin Mutants E40K/E54K Over-Inhibit the Actomyosin Interaction and Lead to a Decrease in the Number of Cycling Cross-Bridges. PLoS ONE, 2012, 7, e47471.	1.1	15
27	ATP binding and crossâ€bridge detachment steps during full Ca²⁺ activation: comparison of myofibril and muscle fibre mechanics by sinusoidal analysis. Journal of Physiology, 2012, 590, 3361-3373.	1.3	9
28	Enhanced Active Cross-Bridges during Diastole: Molecular Pathogenesis of Tropomyosin's HCM Mutations. Biophysical Journal, 2011, 100, 1014-1023.	0.2	59
29	The Role of Tropomyosin Domains in Cooperative Activation of the Actinâ€“Myosin Interaction. Journal of Molecular Biology, 2011, 414, 667-680.	2.0	23
30	Correlation between cross-bridge kinetics obtained from Trp fluorescence of myofibril suspensions and mechanical studies of single muscle fibers in rabbit psoas. Journal of Muscle Research and Cell Motility, 2011, 32, 315-326.	0.9	8
31	Structural and functional aspects of the myosin essential light chain in cardiac muscle contraction. FASEB Journal, 2011, 25, 4394-4405.	0.2	44
32	The role of tropomyosin isoforms and phosphorylation in force generation in thin-filament reconstituted bovine cardiac muscle fibres. Journal of Muscle Research and Cell Motility, 2010, 31, 93-109.	0.9	24
33	Tropomyosin Period 3 Is Essential for Enhancement of Isometric Tension in Thin Filament-Reconstituted Bovine Myocardium. Journal of Biophysics, 2009, 2009, 1-17.	0.8	18
34	Force transients and minimum cross-bridge models in muscular contraction. Journal of Muscle Research and Cell Motility, 2007, 28, 371-395.	0.9	26
35	Temperature-Dependence of Isometric Tension and Cross-Bridge Kinetics of Cardiac Muscle Fibers Reconstituted with a Tropomyosin Internal Deletion Mutant. Biophysical Journal, 2006, 91, 4230-4240.	0.2	20
36	Temperature change does not affect force between regulated actin filaments and heavy meromyosin in single-molecule experiments. Journal of Physiology, 2006, 574, 877-887.	1.3	31

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37	Use of thin filament reconstituted muscle fibres to probe the mechanism of force generation. Journal of Muscle Research and Cell Motility, 2006, 27, 455-468.	0.9	26
38	Role of the N-terminal negative charges of actin in force generation and cross-bridge kinetics in reconstituted bovine cardiac muscle fibres. Journal of Physiology, 2005, 564, 65-82.	1.3	21
39	Elementary Steps of the Cross-Bridge Cycle in Fast-Twitch Fiber Types from Rabbit Skeletal Muscles. Biophysical Journal, 2005, 89, 3248-3260.	0.2	31
40	The effect of tropomyosin on force and elementary steps of the cross-bridge cycle in reconstituted bovine myocardium. Journal of Physiology, 2004, 556, 637-649.	1.3	28
41	What do we learn by studying the temperature effect on isometric tension and tension transients in mammalian striated muscle fibres?. Journal of Muscle Research and Cell Motility, 2003, 24, 127-138.	0.9	31
42	Effects of tropomyosin internal deletion Î”23Tm on isometric tension and the crossâ€bridge kinetics in bovine myocardium. Journal of Physiology, 2003, 553, 457-471.	1.3	22
43	Elementary Steps of the Cross-Bridge Cycle in Bovine Myocardium with and without Regulatory Proteins. Biophysical Journal, 2002, 82, 915-928.	0.2	50
44	The Length of Cooperative Units on the Thin Filament in Rabbit Psoas Muscle Fibres. Experimental Physiology, 2002, 87, 691-697.	0.9	5
45	Temperature effect on isometric tension is mediated by regulatory proteins tropomyosin and troponin in bovine myocardium. Journal of Physiology, 2002, 539, 267-276.	1.3	28
46	Effect of temperature on elementary steps of the crossâ€bridge cycle in rabbit soleus slowâ€twitch muscle fibres. Journal of Physiology, 2001, 531, 219-234.	1.3	60
47	Temperature Change Does Not Affect Force between Single Actin Filaments and HMM from Rabbit Muscles. Biophysical Journal, 2000, 78, 3112-3119.	0.2	32
48	Does Thin Filament Compliance Diminish the Cross-Bridge Kinetics? A Study in Rabbit Psoas Fibers. Biophysical Journal, 1999, 76, 978-984.	0.2	16
49	Comments on the paper by Dr. David Smith entitled "A strain-dependent ratchet model for [phosphate]- and [ATP]-dependent muscle contraction". , 1998, 19, 713-715.		0
50	Kawai's Response to Horiuti and Sakoda. Biophysical Journal, 1993, 65, 2263-2264.	0.2	0
51	Elementary Steps of Contraction Probed by Sinusoidal Analysis Technique in Rabbit Psoas Fibers. Advances in Experimental Medicine and Biology, 1993, 332, 567-580.	0.8	8
52	The Effect of Lattice Spacing Change on Cross-Bridge Kinetics in Rabbit Psoas Fibers. Advances in Experimental Medicine and Biology, 1993, 332, 581-592.	0.8	2
53	Increased resistance of the collagen in avian dystrophic muscle to collagenolytic attack: Evidence for increased crosslinking. Muscle and Nerve, 1989, 12, 476-485.	1.0	12
54	The role of collagen crosslinking in the increased stiffness of avian dystrophic muscle. Muscle and Nerve, 1989, 12, 486-492.	1.0	25

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55	The role of orthophosphate in crossbridge kinetics in chemically skinned rabbit psoas fibres as detected with sinusoidal and step length alterations. Journal of Muscle Research and Cell Motility, 1986, 7, 421-434.	0.9	56
56	Crossbridge kinetics in chemically skinned rabbit psoas fibres when th actin-myosin lattice spacing is altered by dextran T-500. Journal of Muscle Research and Cell Motility, 1985, 6, 313-332.	0.9	38
57	Stiffness and contractile properties of avian normal and dystrophic muscle bundles as measured by sinusoidal length perturbations. Muscle and Nerve, 1985, 8, 503-510.	1.0	17
58	Letters to the editor. Muscle and Nerve, 1985, 8, 806-809.	1.0	0
59	Physiological and Biochemical Characterization of Avian Dystrophic Muscle Reveals Alterations of Collagen. Annals of the New York Academy of Sciences, 1985, 460, 431-433.	1.8	0
60	The Role of Ca2+ in Cross-Bridge Kinetics in Chemically Skinned Rabbit Psoas Fibers. Advances in Experimental Medicine and Biology, 1984, 170, 657-672.	0.8	3
61	Alternate energy transduction routes in chemically skinned rabbit psoas muscle fibres: a further study of the effect of MgATP over a wide concentration range. Journal of Muscle Research and Cell Motility, 1981, 2, 203-214.	0.9	14
62	Sinusoidal analysis: a high resolution method for correlating biochemical reactions with physiological processes in activated skeletal muscles of rabbit, frog and crayfish. Journal of Muscle Research and Cell Motility, 1980, 1, 279-303.	0.9	302
63	Voltage fluctuations at the frog sartorius motor endplate produced by a covalently attached activator. Journal of Membrane Biology, 1979, 51, 145-159.	1.0	11
64	Head Rotation or Dissociation?. Biophysical Journal, 1978, 22, 97-103.	0.2	52
65	Optical Diffraction Studies of Muscle Fibers. Biophysical Journal, 1973, 13, 857-876.	0.2	81