

Jochen Buck

List of Publications by Year in descending order

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59
papers

5,517
citations

136950

32
h-index

161849

54
g-index

59
all docs

59
docs citations

59
times ranked

4022
citing authors

#	ARTICLE	IF	CITATIONS
1	Bicarbonate, carbon dioxide and pH sensing via mammalian bicarbonate-regulated soluble adenylyl cyclase. <i>Interface Focus</i> , 2021, 11, 20200034.	3.0	19
2	Soluble adenylyl cyclase regulates the cytosolic NADH/NAD ⁺ redox state and the bioenergetic switch between glycolysis and oxidative phosphorylation. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2021, 1862, 148367.	1.0	12
3	Discovery of TDI-10229: A Potent and Orally Bioavailable Inhibitor of Soluble Adenylyl Cyclase (sAC,) Tj ETQq1 1 0.784314 rgBT /Over	2.8	16
4	Soluble adenylyl cyclase inhibition prevents human sperm functions essential for fertilization. <i>Molecular Human Reproduction</i> , 2021, 27, .	2.8	26
5	Using an Extracellular Flux Analyzer to Measure Changes in Glycolysis and Oxidative Phosphorylation during Mouse Sperm Capacitation. <i>Journal of Visualized Experiments</i> , 2020, , .	0.3	9
6	Metabolic changes in mouse sperm during capacitation. <i>Biology of Reproduction</i> , 2020, 103, 791-801.	2.7	50
7	Cholesterol Stabilizes TAZ in Hepatocytes to Promote Experimental Non-alcoholic Steatohepatitis. <i>Cell Metabolism</i> , 2020, 31, 969-986.e7.	16.2	117
8	Optimization of lead compounds into on-demand, nonhormonal contraceptives: leveraging a public-private drug discovery institute collaboration. <i>Biology of Reproduction</i> , 2020, 103, 176-182.	2.7	18
9	Transient Sperm Starvation Improves the Outcome of Assisted Reproductive Technologies. <i>Frontiers in Cell and Developmental Biology</i> , 2019, 7, 262.	3.7	32
10	Mammalian pigmentation is regulated by a distinct cAMP-dependent mechanism that controls melanosome pH. <i>Science Signaling</i> , 2018, 11, .	3.6	28
11	Pharmacological modulation of the CO ₂ /HCO ₃ ⁻ /pH-, calcium-, and ATP-sensing soluble adenylyl cyclase. , 2018, 190, 173-186.		46
12	Distinct intracellular sAC-cAMP domains regulate ER calcium signaling and OXPHOS function. <i>Journal of Cell Science</i> , 2017, 130, 3713-3727.	2.0	28
13	Differential Intraocular Pressure Measurements by Tonometry and Direct Cannulation After Treatment with Soluble Adenylyl Cyclase Inhibitors. <i>Journal of Ocular Pharmacology and Therapeutics</i> , 2017, 33, 574-581.	1.4	13
14	Soluble adenylyl cyclase is essential for proper lysosomal acidification. <i>Journal of General Physiology</i> , 2016, 148, 325-339.	1.9	32
15	Discovery of LRE1 as a specific and allosteric inhibitor of soluble adenylyl cyclase. <i>Nature Chemical Biology</i> , 2016, 12, 838-844.	8.0	74
16	Transient exposure to calcium ionophore enables in vitro fertilization in sterile mouse models. <i>Scientific Reports</i> , 2016, 6, 33589.	3.3	40
17	Bithionol Potently Inhibits Human Soluble Adenylyl Cyclase through Binding to the Allosteric Activator Site. <i>Journal of Biological Chemistry</i> , 2016, 291, 9776-9784.	3.4	25
18	The metabolic/pH sensor soluble adenylyl cyclase is a tumor suppressor protein. <i>Oncotarget</i> , 2016, 7, 45597-45607.	1.8	19

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19	Endothelial CD99 signals through soluble adenylyl cyclase and PKA to regulate leukocyte transendothelial migration. <i>Journal of Experimental Medicine</i> , 2015, 212, 1021-1041.	8.5	92
20	Endothelial CD99 Signals Through Soluble Adenylyl Cyclase and PKA to Regulate Leukocyte Transendothelial Migration. <i>FASEB Journal</i> , 2015, 29, 285.1.	0.5	0
21	Nonpigmented Ciliary Epithelial Cells Respond to Acetazolamide by a Soluble Adenylyl Cyclase Mechanism. , 2014, 55, 187.		9
22	A Soluble Adenylyl Cyclase Form Targets to Axonemes and Rescues Beat Regulation in Soluble Adenylyl Cyclase Knockout Mice. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2014, 51, 750-760.	2.9	28
23	The role of soluble adenylyl cyclase in health and disease. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2014, 1842, 2533-2534.	3.8	5
24	Crystal structures of human soluble adenylyl cyclase reveal mechanisms of catalysis and of its activation through bicarbonate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3727-3732.	7.1	113
25	Soluble Adenylyl Cyclase Is Necessary and Sufficient to Overcome the Block of Axonal Growth by Myelin-Associated Factors. <i>Journal of Neuroscience</i> , 2014, 34, 9281-9289.	3.6	22
26	CO ₂ /HCO ₃ ²⁻ and Calcium-regulated Soluble Adenylyl Cyclase as a Physiological ATP Sensor. <i>Journal of Biological Chemistry</i> , 2013, 288, 33283-33291.	3.4	108
27	Neuronal expression of soluble adenylyl cyclase in the mammalian brain. <i>Brain Research</i> , 2013, 1518, 1-8.	2.2	46
28	Pharmacological Distinction between Soluble and Transmembrane Adenylyl Cyclases. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2013, 347, 589-598.	2.5	82
29	cAMP and Mitochondria. <i>Physiology</i> , 2013, 28, 199-209.	3.1	129
30	Identification of a haem domain in human soluble adenylyl cyclase. <i>Bioscience Reports</i> , 2012, 32, 491-499.	2.4	21
31	Metabolic Communication between Astrocytes and Neurons via Bicarbonate-Responsive Soluble Adenylyl Cyclase. <i>Neuron</i> , 2012, 75, 1094-1104.	8.1	225
32	Intracellular cAMP signaling by soluble adenylyl cyclase. <i>Kidney International</i> , 2011, 79, 1277-1288.	5.2	176
33	A Phosphodiesterase 2A Isoform Localized to Mitochondria Regulates Respiration. <i>Journal of Biological Chemistry</i> , 2011, 286, 30423-30432.	3.4	115
34	Regulation of Anterior Chamber Drainage by Bicarbonate-sensitive Soluble Adenylyl Cyclase in the Ciliary Body. <i>Journal of Biological Chemistry</i> , 2011, 286, 41353-41358.	3.4	40
35	Physiological Sensing of Carbon Dioxide/Bicarbonate/pH via Cyclic Nucleotide Signaling. <i>Sensors</i> , 2011, 11, 2112-2128.	3.8	38
36	Soluble Adenylyl Cyclase Defines a Nuclear cAMP Microdomain in Keratinocyte Hyperproliferative Skin Diseases. <i>Journal of Investigative Dermatology</i> , 2010, 130, 1279-1287.	0.7	45

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37	Cyclic AMP Produced inside Mitochondria Regulates Oxidative Phosphorylation. <i>Cell Metabolism</i> , 2009, 9, 265-276.	16.2	422
38	â€œSolubleâ€•adenylyl cyclaseâ€•generated cyclic adenosine monophosphate promotes fast migration in PC12 cells. <i>Journal of Neuroscience Research</i> , 2008, 86, 118-124.	2.9	12
39	Glucose and GLP-1 Stimulate cAMP Production via Distinct Adenylyl Cyclases in INS-1E Insulinoma Cells. <i>Journal of General Physiology</i> , 2008, 132, 329-338.	1.9	104
40	Somatic â€œSolubleâ€™ Adenylyl Cyclase Isoforms Are Unaffected in Sacytm1Lex/Sacytm1Lex â€œKnockoutâ€™ Mice. <i>PLoS ONE</i> , 2008, 3, e3251.	2.5	67
41	Novel Regulation of the Epithelial Na ⁺ Channel by Soluble Adenylyl Cyclase in Kidney Collecting Duct Cells. <i>FASEB Journal</i> , 2008, 22, 934.3.	0.5	0
42	Soluble Adenylyl Cyclase Is Localized to Cilia and Contributes to Ciliary Beat Frequency Regulation via Production of cAMP. <i>Journal of General Physiology</i> , 2007, 130, 99-109.	1.9	99
43	Molecular Details of cAMP Generation in Mammalian Cells: A Tale of Two Systems. <i>Journal of Molecular Biology</i> , 2006, 362, 623-639.	4.2	284
44	Soluble adenylyl cyclase is required for netrin-1 signaling in nerve growth cones. <i>Nature Neuroscience</i> , 2006, 9, 1257-1264.	14.8	89
45	Autoinhibitory regulation of soluble adenylyl cyclase. <i>Molecular Reproduction and Development</i> , 2006, 73, 361-368.	2.0	50
46	Soluble Adenylyl Cyclase Mediates Nerve Growth Factor-induced Activation of Rap1. <i>Journal of Biological Chemistry</i> , 2006, 281, 17253-17258.	3.4	64
47	Bicarbonate activation of adenylyl cyclase via promotion of catalytic active site closure and metal recruitment. <i>Nature Structural and Molecular Biology</i> , 2005, 12, 32-37.	8.2	149
48	Calcium-sensing soluble adenylyl cyclase mediates TNF signal transduction in human neutrophils. <i>Journal of Experimental Medicine</i> , 2005, 202, 353-361.	8.5	62
49	The â€œSolubleâ€•Adenylyl Cyclase in Sperm Mediates Multiple Signaling Events Required for Fertilization. <i>Developmental Cell</i> , 2005, 9, 249-259.	7.0	353
50	Bicarbonate-responsive â€œsolubleâ€•adenylyl cyclase defines a nuclear cAMP microdomain. <i>Journal of Cell Biology</i> , 2004, 164, 527-534.	5.2	157
51	Compartmentalization of bicarbonateâ€•sensitive adenylyl cyclase in distinct signaling microdomains. <i>FASEB Journal</i> , 2003, 17, 82-84.	0.5	259
52	Bicarbonate-regulated Adenylyl Cyclase (sAC) Is a Sensor That Regulates pH-dependent V-ATPase Recycling. <i>Journal of Biological Chemistry</i> , 2003, 278, 49523-49529.	3.4	202
53	Kinetic Properties of â€œSolubleâ€•Adenylyl Cyclase. <i>Journal of Biological Chemistry</i> , 2003, 278, 15922-15926.	3.4	316
54	Purification of Soluble Adenylyl Cyclase. <i>Methods in Enzymology</i> , 2002, 345, 95-105.	1.0	10

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55	A helical lid converts a sulfotransferase to a dehydratase. Nature Structural Biology, 2001, 8, 447-451.	9.7	34
56	Specific expression of soluble adenylyl cyclase in male germ cells. , 2000, 56, 6-11.		92
57	Soluble Adenylyl Cyclase as an Evolutionarily Conserved Bicarbonate Sensor. Science, 2000, 289, 625-628.	12.6	771
58	Spectroscopic Studies of Anhydroretinol, an Endogenous Mammalian and Insectretro-Retinoid. Angewandte Chemie International Edition in English, 1994, 33, 1837-1839.	4.4	21
59	Spektroskopische Untersuchungen von Anhydroretinol, einem endogenen <i>retro</i> -Retinoid aus Säugetieren und Insekten. Angewandte Chemie, 1994, 106, 1954-1956.	2.0	2