Kazuhiro Aoki

List of Publications by Year
in descending order

71 papers	4,217 citations	117625 34 h-index	123424 61 g-index
88 all docs	88 docs citations	88 times ranked	5425 citing authors

#	Article	IF	Citations
1	Redundant roles of EGFR ligands in the ERK activation waves during collective cell migration. Life Science Alliance, 2022, 5, e202101206.	2.8	18
2	LIM Tracker: a software package for cell tracking and analysis with advanced interactivity. Scientific Reports, 2022, 12, 2702.	3.3	13
3	Quantitative live-cell imaging of GPCR downstream signaling dynamics. Biochemical Journal, 2022, 479, 883-900.	3.7	4
4	A chemogenetic platform for controlling plasma membrane signaling and synthetic signal oscillation. Cell Chemical Biology, 2022, 29, 1446-1464.e10.	5.2	7
5	Visualization and Manipulation of Intracellular Signaling. Advances in Experimental Medicine and Biology, 2021, 1293, 225-234.	1.6	6
6	Hierarchical modeling of mechano-chemical dynamics of epithelial sheets across cells and tissue. Scientific Reports, 2021, 11, 4069.	3.3	3
7	CDCP1 promotes compensatory renal growth by integrating Src and Met signaling. Life Science Alliance, 2021, 4, e202000832.	2.8	7
8	3DeeCellTracker, a deep learning-based pipeline for segmenting and tracking cells in 3D time lapse images. ELife, 2021, 10, .	6.0	53
9	Oncogenic mutation or overexpression of oncogenic KRAS or BRAF is not sufficient to confer oncogene addiction. PLoS ONE, 2021, 16, e0249388.	2.5	2
10	Signaling, Deconstructed: Using Optogenetics to Dissect and Direct Information Flow in Biological Systems. Annual Review of Biomedical Engineering, 2021, 23, 61-87.	12.3	26
11	Shedding light on developmental ERK signaling with genetically encoded biosensors. Development (Cambridge), 2021, 148, .	2.5	17
12	A self-exciting point process to study multicellular spatial signaling patterns. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	4
13	Identification of <i>ksg1</i> mutation showing longâ€lived phenotype in fission yeast. Genes To Cells, 2021, 26, 967-978.	1.2	4
14	A microtubuleâ€LUZP1 association around tight junction promotes epithelial cell apical constriction. EMBO Journal, 2021, 40, e104712.	7.8	14
15	Near-infrared imaging in fission yeast using a genetically encoded phycocyanobilin biosynthesis system. Journal of Cell Science, 2021, 134, .	2.0	15
16	Optogenetic relaxation of actomyosin contractility uncovers mechanistic roles of cortical tension during cytokinesis. Nature Communications, 2021, 12, 7145.	12.8	30
17	A novel red fluorescence dopamine biosensor selectively detects dopamine in the presence of norepinephrine in vitro. Molecular Brain, 2021, 14, 173.	2.6	15
18	Improvement of Phycocyanobilin Synthesis for Genetically Encoded Phytochrome-Based Optogenetics. ACS Chemical Biology, 2020, 15, 2896-2906.	3.4	22

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19	ERK-Mediated Mechanochemical Waves Direct Collective Cell Polarization. Developmental Cell, 2020, 53, 646-660.e8.	7.0	152
20	Engineering Orthogonal, Plasma Membrane-Specific SLIPT Systems for Multiplexed Chemical Control of Signaling Pathways in Living Single Cells. ACS Chemical Biology, 2020, 15, 1004-1015.	3.4	22
21	Biophysical research in Okazaki, Japan. Biophysical Reviews, 2020, 12, 237-243.	3.2	3
22	Single-cell quantification of the concentrations and dissociation constants of endogenous proteins. Journal of Biological Chemistry, 2019, 294, 6062-6072.	3.4	19
23	Live-cell Imaging with Genetically Encoded Protein Kinase Activity Reporters. Cell Structure and Function, 2018, 43, 61-74.	1.1	23
24	Cell-to-Cell Heterogeneity in p38-Mediated Cross-Inhibition of JNK Causes Stochastic Cell Death. Cell Reports, 2018, 24, 2658-2668.	6.4	74
25	Composite regulation of ERK activity dynamics underlying tumour-specific traits in the intestine. Nature Communications, 2018, 9, 2174.	12.8	42
26	Inverse tissue mechanics of cell monolayer expansion. PLoS Computational Biology, 2018, 14, e1006029.	3.2	8
27	Efficient synthesis of phycocyanobilin in mammalian cells for optogenetic control of cell signaling. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11962-11967.	7.1	76
28	Propagating Wave of ERK Activation Orients Collective Cell Migration. Developmental Cell, 2017, 43, 305-317.e5.	7.0	209
29	Visualization of Neuregulin 1 ectodomain shedding reveals its local processing in vitro and in vivo. Scientific Reports, 2016, 6, 28873.	3.3	12
30	Variegated RHOA mutations in adult T-cell leukemia/lymphoma. Blood, 2016, 127, 596-604.	1.4	98
31	Multiplexed Fluorescence Imaging of ERK and Akt Activities and Cell-cycle Progression. Cell Structure and Function, 2016, 41, 81-92.	1.1	80
32	Synergistic antitumor effects of combination PI3K/mTOR and MEK inhibition (SAR245409 and pimasertib) in mucinous ovarian carcinoma cells by fluorescence resonance energy transfer imaging. Oncotarget, 2016, 7, 29577-29591.	1.8	18
33	Two New FRET Imaging Measures: Linearly Proportional to and Highly Contrasting the Fraction of Active Molecules. PLoS ONE, 2016, 11, e0164254.	2.5	4
34	Distinct predictive performance of Rac1 and Cdc42 in cell migration. Scientific Reports, 2015, 5, 17527.	3.3	44
35	Quantitative analysis of recombination between YFP and CFP genes of FRET biosensors introduced by lentiviral or retroviral gene transfer. Scientific Reports, 2015, 5, 13283.	3.3	25
36	Intercellular propagation of extracellular signal-regulated kinase activation revealed by in vivo imaging of mouse skin. ELife, 2015, 4, e05178.	6.0	202

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37	Visualization of Intracellular Signaling with Fluorescence Resonance Energy Transfer-Based Biosensors. , 2015, , 31-41.		1
38	Development of a FRET Biosensor with High Specificity for Akt. Cell Structure and Function, 2014, 39, 9-20.	1.1	36
39	Quantitative <i>In Vivo</i> Fluorescence Cross-Correlation Analyses Highlight the Importance of Competitive Effects in the Regulation of Protein-Protein Interactions. Molecular and Cellular Biology, 2014, 34, 3272-3290.	2.3	33
40	Fluorescence resonance energy transfer based quantitative analysis of feedforward and feedback loops in epidermal growth factor receptor signaling and the sensitivity to molecular targeting drugs. FEBS Journal, 2014, 281, 3177-3192.	4.7	22
41	Fluorescence resonance energy transfer imaging of cell signaling from <i>in vitro</i> to <i>in vivo</i>: Basis of biosensor construction, live imaging, and image processing. Development Growth and Differentiation, 2013, 55, 515-522.	1.5	69
42	Stochastic ERK Activation Induced by Noise and Cell-to-Cell Propagation Regulates Cell Density-Dependent Proliferation. Molecular Cell, 2013, 52, 529-540.	9.7	275
43	1SCA-05 Stochastic ERK activity pulses induced by noise and cell-to-cell propagation regulate cell density-dependent proliferation(1SCA Information Dynamics in Biological Systems,Symposium,The 51th) Tj ETQq1 1 0.784314 rgBT /Ov	0.1	1
44	A Quantitative Model of ERK MAP Kinase Phosphorylation in Crowded Media. Scientific Reports, 2013, 3, 1541.	3.3	49
45	2-1 Bioimaging Technologies; Bioimaging with Fluorescence Microscopy. Kyokai Joho Imeji Zasshi/Journal of the Institute of Image Information and Television Engineers, 2013, 67, 742-747.	0.1	0
46	3-4 Identification of Molecular Network Regulating the Random Cell Migration Based on the Quantitative FRET Imaging and Mathematical Modeling. Kyokai Joho Imeji Zasshi/Journal of the Institute of Image Information and Television Engineers, 2013, 67, 776-780.	0.1	0
47	FRET imaging and statistical signal processing reveal positive and negative feedback loops regulating the morphology of randomly migrating HT-1080 cells.. Journal of Cell Science, 2012, 125, 2381-92.	2.0	32
48	Stable expression of <scp>FRET</scp> biosensors: A new light in cancer research. Cancer Science, 2012, 103, 614-619.	3.9	70
49	Spatiotemporal Regulation of Small GTPases as Revealed by Probes Based on the Principle of FÃ¶rster Resonance Energy Transfer (FRET): Implications for Signaling and Pharmacology. Annual Review of Pharmacology and Toxicology, 2011, 51, 337-358.	9.4	48
50	SH3BP1, an Exocyst-Associated RhoGAP, Inactivates Rac1 at the Front to Drive Cell Motility. Molecular Cell, 2011, 42, 650-661.	9.7	66
51	Development of an optimized backbone of FRET biosensors for kinases and GTPases. Molecular Biology of the Cell, 2011, 22, 4647-4656.	2.1	529
52	Processive phosphorylation of ERK MAP kinase in mammalian cells. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 12675-12680.	7.1	157
53	Multiple Decisive Phosphorylation Sites for the Negative Feedback Regulation of SOS1 via ERK*. Journal of Biological Chemistry, 2010, 285, 33540-33548.	3.4	62
54	Revolving movement of a dynamic cluster of actin filaments during mitosis. Journal of Cell Biology, 2010, 191, 453-462.	5.2	65

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55	Ras and Calcium Signaling Pathways Converge at Raf1 via the Shoc2 Scaffold Protein. Molecular Biology of the Cell, 2010, 21, 1088-1096.	2.1	34
56	The Scaffold Protein Shoc2/SUR-8 Accelerates the Interaction of Ras and Raf. Journal of Biological Chemistry, 2010, 285, 7818-7826.	3.4	54
57	Visualization of small GTPase activity with fluorescence resonance energy transfer-based biosensors. Nature Protocols, 2009, 4, 1623-1631.	12.0	127
58	FRET imaging and in silico simulation: analysis of the signaling network of nerve growth factor-induced neuritogenesis. Brain Cell Biology, 2008, 36, 19-30.	3.2	8
59	Quantification of Local Morphodynamics and Local GTPase Activity by Edge Evolution Tracking. PLoS Computational Biology, 2008, 4, e1000223.	3.2	23
60	Phosphorylation and activation of the Rac1 and Cdc42 GEF Asef in A431 cells stimulated by EGF. Journal of Cell Science, 2008, 121, 2635-2642.	2.0	57
61	Rapid Turnover Rate of Phosphoinositides at the Front of Migrating MDCK Cells. Molecular Biology of the Cell, 2008, 19, 4213-4223.	2.1	66
62	Visualization of growth signal transduction cascades in living cells with genetically encoded probes based on FÃ¶rster resonance energy transfer. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 2143-2151.	4.0	42
63	Rap1-PDZ-GEF1 interacts with a neurotrophin receptor at late endosomes, leading to sustained activation of Rap1 and ERK and neurite outgrowth. Journal of Cell Biology, 2007, 178, 843-860.	5.2	103
64	An essential role for the SHIP2-dependent negative feedback loop in neuritogenesis of nerve growth factorâ€“stimulated PC12 cells. Journal of Cell Biology, 2007, 177, 817-827.	5.2	64
65	GTP Hydrolysis by the Rho Family GTPase TC10 Promotes Exocytic Vesicle Fusion. Developmental Cell, 2006, 11, 411-421.	7.0	62
66	Dynamics of the Ras/ERK MAPK Cascade as Monitored by Fluorescent Probes. Journal of Biological Chemistry, 2006, 281, 8917-8926.	3.4	302
67	Improvement of the bioluminescence reporter system for real-time monitoring of circadian rhythms in the cyanobacterium Synechocystis sp. strain PCC 6803. Genes and Genetic Systems, 2005, 80, 19-23.	0.7	8
68	Local Phosphatidylinositol 3,4,5-Trisphosphate Accumulation Recruits Vav2 and Vav3 to Activate Rac1/Cdc42 and Initiate Neurite Outgrowth in Nerve Growth Factor-stimulated PC12 Cells. Molecular Biology of the Cell, 2005, 16, 2207-2217.	2.1	132
69	FRET imaging in nerve growth cones reveals a high level of RhoA activity within the peripheral domain. Molecular Brain Research, 2005, 139, 277-287.	2.3	40
70	Monitoring spatio-temporal regulation of Ras and Rho GTPases with GFP-based FRET probes. Methods, 2005, 37, 146-153.	3.8	55
71	Spatio-temporal Regulation of Rac1 and Cdc42 Activity during Nerve Growth Factor-induced Neurite Outgrowth in PC12 Cells. Journal of Biological Chemistry, 2004, 279, 713-719.	3.4	133