Marino Zerial

List of Publications by Year
in descending order

148 papers	31,382 citations	12597 71 h-index	12272 138 g-index
173 all docs	173 docs citations	173 times ranked	26061 citing authors

#	Article	IF	Citations
1	Rab proteins as membrane organizers. Nature Reviews Molecular Cell Biology, 2001, 2, 107-117.	16.1	3,011
2	Rab Conversion as a Mechanism of Progression from Early to Late Endosomes. Cell, 2005, 122, 735-749.	13.5	1,434
3	The small GTPase rab5 functions as a regulatory factor in the early endocytic pathway. Cell, 1992, 70, 715-728.	13.5	1,280
4	Localization of low molecular weight GTP binding proteins to exocytic and endocytic compartments. Cell, 1990, 62, 317-329.	13.5	1,122
5	Image-based analysis of lipid nanoparticleâ€“mediated siRNA delivery, intracellular trafficking and endosomal escape. Nature Biotechnology, 2013, 31, 638-646.	9.4	1,060
6	EEA1 links PI(3)K function to Rab5 regulation of endosome fusion. Nature, 1998, 394, 494-498.	13.7	1,036
7	rab5 controls early endosome fusion in vitro. Cell, 1991, 64, 915-925.	13.5	1,020
8	Distinct Membrane Domains on Endosomes in the Recycling Pathway Visualized by Multicolor Imaging of Rab4, Rab5, and Rab11. Journal of Cell Biology, 2000, 149, 901-914.	2.3	883
9	Targeted Delivery of RNAi Therapeutics With Endogenous and Exogenous Ligand-Based Mechanisms. Molecular Therapy, 2010, 18, 1357-1364.	3.7	831
10	Content-aware image restoration: pushing the limits of fluorescence microscopy. Nature Methods, 2018, 15, 1090-1097.	9.0	758
11	The Rab5 effector EEA1 is a core component of endosome docking. Nature, 1999, 397, 621-625.	13.7	752
12	The diversity of Rab proteins in vesicle transport. Current Opinion in Cell Biology, 1997, 9, 496-504.	2.6	732
13	Identification of the Switch in Early-to-Late Endosome Transition. Cell, 2010, 141, 497-508.	13.5	642
14	Genome-wide analysis of human kinases in clathrin- and caveolae/raft-mediated endocytosis. Nature, 2005, 436, 78-86.	13.7	580
15	Phosphatidylinositol-3-OH kinases are Rab5 effectors. Nature Cell Biology, 1999, 1, 249-252.	4.6	572
16	A Novel Rab5 GDP/GTP Exchange Factor Complexed to Rabaptin-5 Links Nucleotide Exchange to Effector Recruitment and Function. Cell, 1997, 90, 1149-1159.	13.5	552
17	APPL Proteins Link Rab5 to Nuclear Signal Transduction via an Endosomal Compartment. Cell, 2004, 116, 445-456.	13.5	496
18	Rab Proteins and the Compartmentalization of the Endosomal System. Cold Spring Harbor Perspectives in Biology, 2014, 6, a022616-a022616.	2.3	483

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19	Not just a sink: endosomes in control of signal transduction. Current Opinion in Cell Biology, 2004, 16, 400-406.	2.6	481
20	Caveolin-Stabilized Membrane Domains as Multifunctional Transport and Sorting Devices in Endocytic Membrane Traffic. Cell, 2004, 118, 767-780.	13.5	470
21	Oligomeric Complexes Link Rab5 Effectors with NSF and Drive Membrane Fusion via Interactions between EEA1 and Syntaxin 13. Cell, 1999, 98, 377-386.	13.5	460
22	Rabaptin-5 is a direct effector of the small GTPase Rab5 in endocytic membrane fusion. Cell, 1995, 83, 423-432.	13.5	451
23	Rab5 regulates motility of early endosomes on microtubules. Nature Cell Biology, 1999, 1, 376-382.	4.6	433
24	Systems survey of endocytosis by multiparametric image analysis. Nature, 2010, 464, 243-249.	13.7	407
25	Hypervariable C-termmal domain of rab proteins acts as a targeting signal. Nature, 1991, 353, 769-772.	13.7	386
26	Rab GTPases in vesicular transport. Current Opinion in Cell Biology, 1993, 5, 613-620.	2.6	383
27	An enzymatic cascade of Rab5 effectors regulates phosphoinositide turnover in the endocytic pathway. Journal of Cell Biology, 2005, 170, 607-618.	2.3	354
28	Rabenosyn-5, a Novel Rab5 Effector, Is Complexed with Hvps45 and Recruited to Endosomes through a Fyve Finger Domain. Journal of Cell Biology, 2000, 151, 601-612.	2.3	338
29	Rab5 is necessary for the biogenesis of the endolysosomal system in vivo. Nature, 2012, 485, 465-470.	13.7	322
30	GTPase activity of Rab5 acts as a timer for endocytic membrane fusion. Nature, 1996, 383, 266-269.	13.7	317
31	A large-scale chemical modification screen identifies design rules to generate siRNAs with high activity, high stability and low toxicity. Nucleic Acids Research, 2009, 37, 2867-2881.	6.5	315
32	Kinase-regulated quantal assemblies and kiss-and-run recycling of caveolae. Nature, 2005, 436, 128-133.	13.7	312
33	The Endosomal Protein Appl1 Mediates Akt Substrate Specificity and Cell Survival in Vertebrate Development. Cell, 2008, 133, 486-497.	13.5	307
34	Divalent Rab effectors regulate the sub-compartmental organization and sorting of early endosomes. Nature Cell Biology, 2002, 4, 124-133.	4.6	297
35	Membrane association of Rab5 mediated by GDP-dissociation inhibitor and accompanied by GDP/GTP exchange. Nature, 1994, 368, 157-160.	13.7	296
36	Rab proteins and the road maps for intracellular transport. Neuron, 1993, 11, 789-799.	3.8	294

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37	Modulation of Receptor Recycling and Degradation by the Endosomal Kinesin KIF16B. Cell, 2005, 121, 437-450.	13.5	288
38	The Eps8 protein coordinates EGF receptor signalling through Rac and trafficking through Rab5. Nature, 2000, 408, 374-377.	13.7	271
39	Regulated Localization of Rab18 to Lipid Droplets. Journal of Biological Chemistry, 2005, 280, 42325-42335.	1.6	257
40	Distinct Rab-binding domains mediate the interaction of Rabaptin-5 with GTP-bound rab4 and rab5. EMBO Journal, 1998, 17, 1941-1951.	3.5	214
41	Endosome dynamics regulated by a Rho protein. Nature, 1996, 384, 427-432.	13.7	209
42	Reconstitution of Rab- and SNARE-dependent membrane fusion by synthetic endosomes. Nature, 2009, 459, 1091-1097.	13.7	201
43	RhoD regulates endosome dynamics through Diaphanous-related Formin and Src tyrosine kinase. Nature Cell Biology, 2003, 5, 195-204.	4.6	200
44	Huntingtinâ€“HAP40 complex is a novel Rab5 effector that regulates early endosome motility and is up-regulated in Huntington's disease. Journal of Cell Biology, 2006, 172, 605-618.	2.3	196
45	The Rab5 Effector Rabankyrin-5 Regulates and Coordinates Different Endocytic Mechanisms. PLoS Biology, 2004, 2, e261.	2.6	192
46	Functional Synergy between Rab5 Effector Rabaptin-5 and Exchange Factor Rabex-5 When Physically Associated in a Complex. Molecular Biology of the Cell, 2001, 12, 2219-2228.	0.9	180
47	MAPK signaling to the early secretory pathway revealed by kinase/phosphatase functional screening. Journal of Cell Biology, 2010, 189, 997-1011.	2.3	173
48	Mosaic Organization of the Endocytic Pathway. Experimental Cell Research, 2002, 272, 8-14.	1.2	158
49	Signal processing by the endosomal system. Current Opinion in Cell Biology, 2016, 39, 53-60.	2.6	154
50	Selective Membrane Recruitment of EEA1 Suggests a Role in Directional Transport of Clathrin-coated Vesicles to Early Endosomes. Journal of Biological Chemistry, 2000, 275, 3745-3748.	1.6	149
51	Co-operative regulation of endocytosis by three RAB5 isoforms. FEBS Letters, 1995, 366, 65-71.	1.3	144
52	The involvement of the small GTP-binding protein Rab5a in neuronal endocytosis. Neuron, 1994, 13, 11-22.	3.8	140
53	Regulation of Epidermal Growth Factor Receptor Trafficking by Lysine Deacetylase HDAC6. Science Signaling, 2009, 2, ra84.	1.6	140
54	Divalent interaction of the GGAs with the Rabaptin-5-Rabex-5 complex. EMBO Journal, 2003, 22, 78-88.	3.5	135

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55	An endosomal tether undergoes an entropic collapse to bring vesicles together. Nature, 2016, 537, 107-111.	13.7	135
56	Rab17 Regulates Membrane Trafficking through Apical Recycling Endosomes in Polarized Epithelial Cells. Journal of Cell Biology, 1998, 140, 1039-1053.	2.3	132
57	Early Endosomal Regulation of Smad-dependent Signaling in Endothelial Cells. Journal of Biological Chemistry, 2002, 277, 18046-18052.	1.6	132
58	Phosphorylation of EEA1 by p38 MAP kinase regulates Î¼ opioid receptor endocytosis. EMBO Journal, 2005, 24, 3235-3246.	3.5	129
59	The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. Gene, 1992, 112, 261-264.	1.0	119
60	Membrane identity and GTPase cascades regulated by toggle and cutâ€out switches. Molecular Systems Biology, 2008, 4, 206.	3.2	117
61	Kinetics of Interaction of Rab5 and Rab7 with Nucleotides and Magnesium Ions. Journal of Biological Chemistry, 1996, 271, 20470-20478.	1.6	108
62	Two distinct effectors of the small GTPase Rab5 cooperate in endocytic membrane fusion. EMBO Journal, 1998, 17, 1930-1940.	3.5	99
63	Caenorhabditis elegans screen reveals role of PAR-5 in RAB-11-recycling endosome positioning and apicobasal cell polarity. Nature Cell Biology, 2012, 14, 666-676.	4.6	96
64	Purification and Identification of Novel Rab Effectors Using Affinity Chromatography. Methods, 2000, 20, 403-410.	1.9	94
65	Regulation of EGFR signal transduction by analogue-to-digital conversion in endosomes. ELife, 2015, 4, .	2.8	93
66	APPL endosomes are not obligatory endocytic intermediates but act as stable cargo-sorting compartments. Journal of Cell Biology, 2015, 211, 123-144.	2.3	87
67	In Vivo Interaction of the Adapter Protein CD2-associated Protein with the Type 2 Polycystic Kidney Disease Protein, Polycystin-2. Journal of Biological Chemistry, 2000, 275, 32888-32893.	1.6	86
68	Foreign transmembrane peptides replacing the internal signal sequence of transferrin receptor allow its translocation and membrane binding. Cell, 1987, 48, 147-155.	13.5	84
69	A versatile pipeline for the multi-scale digital reconstruction and quantitative analysis of 3D tissue architecture. ELife, 2015, 4, .	2.8	84
70	Cellular Uptake Mechanisms and Endosomal Trafficking of Supercharged Proteins. Chemistry and Biology, 2012, 19, 831-843.	6.2	80
71	Mammalian <scp>CORVET</scp> Is Required for Fusion and Conversion of Distinct Early Endosome Subpopulations. Traffic, 2014, 15, 1366-1389.	1.3	80
72	A Predictive 3D Multi-Scale Model of Biliary Fluid Dynamics in the Liver Lobule. Cell Systems, 2017, 4, 277-290.e9.	2.9	79

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73	Gene distribution and nucleotide sequence organization in the human genome. FEBS Journal, 1986, 160, 479-485.	0.2	78
74	Nanoparticle-formulated siRNA targeting integrins inhibits hepatocellular carcinoma progression in mice. Nature Communications, 2014, 5, 3869.	5.8	76
75	Integration of Chemical and RNAi Multiparametric Profiles Identifies Triggers of Intracellular Mycobacterial Killing. Cell Host and Microbe, 2013, 13, 129-142.	5.1	74
76	Functional properties of hepatocytes in vitro are correlated with cell polarity maintenance. Experimental Cell Research, 2017, 350, 242-252.	1.2	73
77	Gene distribution and nucleotide sequence organization in the mouse genome. FEBS Journal, 1986, 160, 469-478.	0.2	70
78	A General Theoretical Framework to Infer Endosomal Network Dynamics from Quantitative Image Analysis. Current Biology, 2012, 22, 1381-1390.	1.8	69
79	Vps9, Rabex-5 and DSS4: proteins with weak but distinct nucleotide-exchange activities for Rab proteins11Edited by J. Karn. Journal of Molecular Biology, 2001, 310, 141-156.	2.0	67
80	Rab5 and Alsin regulate stress-activated cytoprotective signaling on mitochondria. ELife, 2018, 7, .	2.8	65
81	Endosomal escape of delivered mRNA from endosomal recycling tubules visualized at the nanoscale. Journal of Cell Biology, 2022, 221, .	2.3	60
82	Natural Product-Derived Modulators of Cell Cycle Progression and Viral Entry by Enantioselective Oxa Diels-Alder Reactions on the Solid Phase. Chemistry and Biology, 2007, 14, 443-451.	6.2	58
83	Identification of siRNA delivery enhancers by a chemical library screen. Nucleic Acids Research, 2015, 43, 7984-8001.	6.5	58
84	Three-dimensional spatially resolved geometrical and functional models of human liver tissue reveal new aspects of NAFLD progression. Nature Medicine, 2019, 25, 1885-1893.	15.2	58
85	A GDP/GTP Exchange-stimulatory Activity for the Rab5-RabGDI Complex on Clathrin-coated Vesicles from Bovine Brain. Journal of Biological Chemistry, 1995, 270, 11257-11262.	1.6	52
86	Endocytosis: Past, Present, and Future. Cold Spring Harbor Perspectives in Biology, 2014, 6, a022509-a022509.	2.3	50
87	Correlative singleâ€molecule localization microscopy and electron tomography reveals endosome nanoscale domains. Traffic, 2019, 20, 601-617.	1.3	49
88	Regulation of Liver Metabolism by the Endosomal GTPase Rab5. Cell Reports, 2015, 11, 884-892.	2.9	47
89	Automatedde novo sequencing of proteins using the differential scanning technique. Proteomics, 2001, 1, 668-682.	1.3	45
90	Isolation of a mouse cDNA encoding Rab23, a small novel GTPase expressed predominantly in the brain. Gene, 1994, 138, 207-211.	1.0	44

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91	Liquid-crystal organization of liver tissue. ELife, 2019, 8, .	2.8	42
92	The virtual liver: state of the art and future perspectives. Archives of Toxicology, 2014, 88, 2071-2075.	1.9	41
93	Genomic localization of hepatitis B virus in a human hepatoma cell line. Nucleic Acids Research, 1986, 14, 8373-8386.	6.5	40
94	[37] Localization of Rab family members in animal cells. Methods in Enzymology, 1992, 219, 398-407.	0.4	40
95	Liprin-Î±1 and ERC1 control cell edge dynamics by promoting focal adhesion turnover. Scientific Reports, 2016, 6, 33653.	1.6	40
96	[19] Expression of Rab GTPases using recombinant vaccinia viruses. Methods in Enzymology, 1995, 257, 155-164.	0.4	39
97	The Interaction Properties of the Human Rab GTPase Family â€" A Comparative Analysis Reveals Determinants of Molecular Binding Selectivity. PLoS ONE, 2012, 7, e34870.	1.1	38
98	Mice with a homozygous gene trap vector insertion in mgcRacGAP die during pre-implantation development. Mechanisms of Development, 2001, 102, 33-44.	1.7	37
99	Claudin-3 regulates bile canalicular paracellular barrier and cholesterol gallstone core formation in mice. Journal of Hepatology, 2018, 69, 1308-1316.	1.8	34
100	BIOLOGISTICS AND THE STRUGGLE FOR EFFICIENCY: CONCEPTS AND PERSPECTIVES. International Journal of Modeling, Simulation, and Scientific Computing, 2009, 12, 533-548.	0.9	33
101	Regulation of Endosome Dynamics by Rab5 and Huntingtinâ€HAP40 Effector Complex in Physiological versus Pathological Conditions. Methods in Enzymology, 2008, 438, 239-257.	0.4	32
102	Dual function of rhoD in vesicular movement and cell motility. European Journal of Cell Biology, 2001, 80, 391-398.	1.6	31
103	Nonrandom distribution of MMTV proviral sequences in the mouse genome. Nucleic Acids Research, 1987, 15, 3009-3022.	6.5	30
104	The Rab Protein Family: Genetic Mapping of Six Rab Genes in the Mouse. Genomics, 1995, 30, 439-444.	1.3	30
105	A drug discovery platform to identify compounds that inhibit EGFR triple mutants. Nature Chemical Biology, 2020, 16, 577-586.	3.9	30
106	Bile canaliculi remodeling activates <scp>YAP</scp> via the actin cytoskeleton during liver regeneration. Molecular Systems Biology, 2020, 16, e8985.	3.2	29
107	A non-linear system patterns Rab5 GTPase on the membrane. ELife, 2020, 9, .	2.8	29
108	[27] Use of Rab-GDP dissociation inhibitor for solubilization and delivery of Rab proteins to biological membranes in streptolysin O-permeabilized cells. Methods in Enzymology, 1995, 257, 243-253.	0.4	27

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109	Auto-regulation of Rab5 GEF activity in Rabex5 by allosteric structural changes, catalytic core dynamics and ubiquitin binding. ELife, 2019, 8, .	2.8	26
110	Retrograde transport of Akt by a neuronal Rab5-APPL1 endosome. Scientific Reports, 2019, 9, 2433.	1.6	24
111	Isolation of a murine cDNA clone encoding Rab 19, a novel tissue-specific small GTPase. Gene, 1995, 155, 257-260.	1.0	23
112	Deducing the mechanism of action of compounds identified in phenotypic screens by integrating their multiparametric profiles with a reference genetic screen. Nature Protocols, 2014, 9, 474-490.	5.5	23
113	A decade of molecular cell biology: achievements and challenges. Nature Reviews Molecular Cell Biology, 2011, 12, 669-674.	16.1	20
114	[15] Expression, purification, and characterization of Rab5 effector complex, rabaptin-5/rabex-5. Methods in Enzymology, 2001, 329, 132-145.	0.4	19
115	[2] Purification of posttranslationally modified and unmodified Rab5 protein expressed in Spodoptera frugiperda cells. Methods in Enzymology, 1995, 257, 9-15.	0.4	18
116	Rab7: NMR and kinetics analysis of intact and C-terminal truncated constructs. , 1997, 27, 204-209.		16
117	Observing the growth of individual actin filaments in cell extracts by time-lapse atomic force microscopy. FEBS Letters, 2003, 551, 25-28.	1.3	16
118	Survival of the weakest: signaling aided by endosomes. Journal of Cell Biology, 2008, 182, 823-825.	2.3	16
119	A probabilistic method to quantify the colocalization of markers on intracellular vesicular structures visualized by light microscopy. AIP Conference Proceedings, 2015, , .	0.3	16
120	A high throughput siRNA screen identifies genes that regulate mannose 6-phosphate receptor trafficking. Journal of Cell Science, 2014, 127, 5079-92.	1.2	15
121	Anisotropic expansion of hepatocyte lumina enforced by apical bulkheads. Journal of Cell Biology, 2021, 220, .	2.3	14
122	Resilience of three-dimensional sinusoidal networks in liver tissue. PLoS Computational Biology, 2020, 16, e1007965.	1.5	12
123	[14] Purification of EEA1 from bovine brain cytosol using Rab5 affinity chromatography and activity assays. Methods in Enzymology, 2001, 329, 120-132.	0.4	9
124	Chemical regulators of epithelial plasticity reveal a nuclear receptor pathway controlling myofibroblast differentiation. Scientific Reports, 2016, 6, 29868.	1.6	9
125	Automatic recognition and characterization of different non-parenchymal cells in liver tissue. , 2016, , .		9
126	RNAi-nanoparticulate manipulation of gene expression as a new functional genomics tool in the liver. Journal of Hepatology, 2016, 64, 899-907.	1.8	9

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127	Mouse metanephric kidney as a model system for identifying developmentally regulated genes. Journal of Cellular Physiology, 1997, 173, 147-151.	2.0	7
128	A Combination of Screening and Computational Approaches for the Identification of Novel Compounds That Decrease Mast Cell Degranulation. Journal of Biomolecular Screening, 2015, 20, 720-728.	2.6	7
129	Quantification of nematic cell polarity in three-dimensional tissues. PLoS Computational Biology, 2020, 16, e1008412.	1.5	6
130	Acute loss of the hepatic endo-lysosomal system in vivo causes compensatory changes in iron homeostasis. Scientific Reports, 2017, 7, 4023.	1.6	4
131	Active APPL1 sequestration by Plasmodium favors liver-stage development. Cell Reports, 2022, 39, 110886.	2.9	4
132	[22] Using oligonucleotides for cloning of rab proteins by polymerase chain reaction. Methods in Enzymology, 1995, 257, 189-199.	0.4	3
133	Genetic mapping of Rab20 on mouse Chromosome 8. Mammalian Genome, 1997, 8, 291-292.	1.0	3
134	The RhoD to centrosomal duplication. Small GTPases, 2013, 4, 116-122.	0.7	3
135	Revealing Molecular Mechanisms by Integrating High-Dimensional Functional Screens with Protein Interaction Data. PLoS Computational Biology, 2014, 10, e1003801.	1.5	3
136	Quantitative intracellular retention of delivered RNAs through optimized cell fixation and immunostaining. Rna, 2022, 28, 433-446.	1.6	3
137	[34] Expression of Rab proteins during mouse embryonic development. Methods in Enzymology, 1995, 257, 324-332.	0.4	2
138	Cellular dynamics observed at sub-nanometer resolution using atomic force microscopy. Microscopy and Microanalysis, 2002, 8, 892-893.	0.2	0
139	Profiling Structural Alterations During Nucleotide Exchange by. Methods in Molecular Biology, 2021, 2293, 69-89.	0.4	0
140	Unraveling the design principles of endocytosis and signaling using multiâ€parametric image analysis.. FASEB Journal, 2007, 21, .	0.2	0
141	Basic Phenotypes of Endocytic System Recognized by Independent Phenotypes Analysis of a High-throughput Genomic Screen. , 2019, , .		0
142	Rab Domains on Endosomes. , 2006, , 23-35.		0
143	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0
144	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0

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145	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0
146	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0
147	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0
148	Resilience of three-dimensional sinusoidal networks in liver tissue. , 2020, 16, e1007965.		0