

Alan V Smrcka

List of Publications by Year in descending order

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113
papers

6,338
citations

57758

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122
all docs

122
docs citations

122
times ranked

6841
citing authors

#	ARTICLE	IF	CITATIONS
1	A network of G α signaling partners is revealed by proximity labeling proteomics analysis and includes PDZ-RhoGEF. <i>Science Signaling</i> , 2022, 15, eabi9869.	3.6	6
2	Identifying Novel Signaling Mechanisms Downstream of G α -Coupled Receptors. <i>FASEB Journal</i> , 2022, 36, .	0.5	0
3	A naturally occurring membrane-anchored G α s variant, XL α s, activates phospholipase C β 4. <i>Journal of Biological Chemistry</i> , 2022, 298, 102134.	3.4	3
4	A universal allosteric mechanism for G protein activation. <i>Molecular Cell</i> , 2021, 81, 1384-1396.e6.	9.7	33
5	Identification of PDZ-RhoGEF (PRG) as a Novel G α i Target. <i>FASEB Journal</i> , 2021, 35, .	0.5	0
6	Golgi-Resident β 1-Adrenergic Receptor Signaling to Cardiac Hypertrophy in Cardiac Myocytes in Vitro and in Failing Hearts in Vivo. <i>FASEB Journal</i> , 2021, 35, .	0.5	0
7	Signaling Specificity of the G α G Protein Subfamily8.5.5. <i>FASEB Journal</i> , 2021, 35, .	0.5	0
8	Uveal melanoma-associated mutations in PLC β 4 are constitutively activating and promote melanocyte proliferation and tumorigenesis. <i>Science Signaling</i> , 2021, 14, eabj4243.	3.6	7
9	Activation of Phospholipase C β by G α β 3 and G α q Involves C-Terminal Rearrangement to Release Autoinhibition. <i>Structure</i> , 2020, 28, 810-819.e5.	3.3	23
10	Hypertension induces glomerulosclerosis in phospholipase C- β 1 deficiency. <i>American Journal of Physiology - Renal Physiology</i> , 2020, 318, F1177-F1187.	2.7	9
11	Discovery of Small Molecules That Target the Phosphatidylinositol (3,4,5) Trisphosphate (PIP $_3$)-Dependent Rac Exchanger 1 (P-Rex1) PIP $_3$ -Binding Site and Inhibit P-Rex1-Dependent Functions in Neutrophils. <i>Molecular Pharmacology</i> , 2020, 97, 226-236.	2.3	13
12	β 2-arrestin mediates communication between plasma membrane and intracellular GPCRs to regulate signaling. <i>Communications Biology</i> , 2020, 3, 789.	4.4	4
13	Programming of Distinct Chemokine-Dependent and -Independent Search Strategies for Th1 and Th2 Cells Optimizes Function at Inflamed Sites. <i>Immunity</i> , 2019, 51, 298-309.e6.	14.3	50
14	G-protein β 3 subunits as multi-functional scaffolds and transducers in G-protein-coupled receptor signaling. <i>Cellular and Molecular Life Sciences</i> , 2019, 76, 4447-4459.	5.4	50
15	Golgi localized β 1-adrenergic receptors stimulate Golgi PI4P hydrolysis by PLC β to regulate cardiac hypertrophy. <i>ELife</i> , 2019, 8, .	6.0	79
16	Phospholipase C β Regulation of Cardiac Fibroblasts. <i>FASEB Journal</i> , 2019, 33, 809.4.	0.5	0
17	The physiological hypertrophic agonist, norepinephrine, is able to induce PLC-mediated PI4P hydrolysis in cardiac myocytes via a pool of internal β 1-adrenergic receptors. <i>FASEB Journal</i> , 2019, 33, 810.2.	0.5	0
18	β 1-Adrenergic Receptors in the Golgi Apparatus are Activated by Cell Permeable Agonists and Stimulate PLC-mediated PI4P Hydrolysis in Cardiac Myocytes. <i>FASEB Journal</i> , 2019, 33, .	0.5	0

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19	Activated heterotrimeric G protein β subunits inhibit Rap-dependent cell adhesion and promote cell migration. <i>Journal of Biological Chemistry</i> , 2018, 293, 1570-1578.	3.4	10
20	Gedunin- and Khivorin-Derivatives Are Small-Molecule Partial Agonists for Adhesion G Protein-Coupled Receptors GPR56/ADGRG1 and GPR114/ADGRG5. <i>Molecular Pharmacology</i> , 2018, 93, 477-488.	2.3	54
21	G protein $\beta\gamma$ subunits directly interact with and activate phospholipase C δ . <i>Journal of Biological Chemistry</i> , 2018, 293, 6387-6397.	3.4	33
22	Targeting G protein-coupled receptor signalling by blocking G proteins. <i>Nature Reviews Drug Discovery</i> , 2018, 17, 789-803.	46.4	121
23	Phosphatidylinositol 4-phosphate is a major source of GPCR-stimulated phosphoinositide production. <i>Science Signaling</i> , 2018, 11, .	3.6	32
24	Compartmentalized cyclic nucleotides have opposing effects on regulation of hypertrophic phospholipase C μ signaling in cardiac myocytes. <i>Journal of Molecular and Cellular Cardiology</i> , 2018, 121, 51-59.	1.9	21
25	An Internal Pool of β -Adrenergic Receptors Activates PLC ϵ -mediated PI4P Hydrolysis in Cardiac Myocytes. <i>FASEB Journal</i> , 2018, 32, 686.8.	0.5	1
26	Biasing μ Opioid Receptors with G Protein Inhibitors to Improve Opioid Analgesics. <i>FASEB Journal</i> , 2018, 32, 689.4.	0.5	0
27	PLC μ 1 regulates SDF-1 α -induced lymphocyte adhesion and migration to sites of inflammation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2693-2698.	7.1	20
28	The Epac-Phospholipase C μ Pathway Regulates Endocannabinoid Signaling and Cocaine-Induced Disinhibition of Ventral Tegmental Area Dopamine Neurons. <i>Journal of Neuroscience</i> , 2017, 37, 3030-3044.	3.6	25
29	Targeted calcium influx boosts cytotoxic T lymphocyte function in the tumour microenvironment. <i>Nature Communications</i> , 2017, 8, 15365.	12.8	41
30	Phospholipase C μ Modulates Rap1 Activity and the Endothelial Barrier. <i>PLoS ONE</i> , 2016, 11, e0162338.	2.5	4
31	Inhibition of G Protein $\beta\gamma$ Subunit Signaling Abrogates Nephritis in Lupus-Prone Mice. <i>Arthritis and Rheumatology</i> , 2016, 68, 2244-2256.	5.6	11
32	Phospholipase C μ signaling mediates endothelial cell inflammation and barrier disruption in acute lung injury. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2016, 311, L517-L524.	2.9	27
33	Dihydromunduletone Is a Small-Molecule Selective Adhesion G Protein-Coupled Receptor Antagonist. <i>Molecular Pharmacology</i> , 2016, 90, 214-224.	2.3	47
34	Dynamic regulation of neutrophil polarity and migration by the heterotrimeric G protein subunits β -GTP and β . <i>Science Signaling</i> , 2016, 9, ra22.	3.6	29
35	Thrombin Promotes Sustained Signaling and Inflammatory Gene Expression through the CDC25 and Ras-associating Domains of Phospholipase C μ . <i>Journal of Biological Chemistry</i> , 2015, 290, 26776-26783.	3.4	16
36	Adenylyl Cyclase 5 Regulation by G $\beta\gamma$ Involves Isoform-Specific Use of Multiple Interaction Sites. <i>Molecular Pharmacology</i> , 2015, 88, 758-767.	2.3	31

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37	Regulation of Phosphatidylinositol-specific Phospholipase C at the Nuclear Envelope in Cardiac Myocytes. <i>Journal of Cardiovascular Pharmacology</i> , 2015, 65, 203-210.	1.9	16
38	Fingerprinting G protein-coupled receptor signaling. <i>Science Signaling</i> , 2015, 8, fs20.	3.6	5
39	Phospholipase C Epsilon (PLC ϵ) Induced TRPC6 Activation: A Common but Redundant Mechanism in Primary Podocytes. <i>Journal of Cellular Physiology</i> , 2015, 230, 1389-1399.	4.1	27
40	Characterization of Small Molecule G $\beta\gamma$ Inhibitors in the Context of Inflammation. <i>FASEB Journal</i> , 2015, 29, 618.4.	0.5	0
41	PI4P Hydrolysis Represents a General Mechanism for DAG Generation and PKC/PKD Activation. <i>FASEB Journal</i> , 2015, 29, 618.6.	0.5	0
42	Epac1 and Epac2 are differentially involved in inflammatory and remodeling processes induced by cigarette smoke. <i>FASEB Journal</i> , 2014, 28, 4617-4628.	0.5	24
43	A Chemical Biology Approach Demonstrates G Protein $\beta\gamma$ Subunits Are Sufficient to Mediate Directional Neutrophil Chemotaxis. <i>Journal of Biological Chemistry</i> , 2014, 289, 17791-17801.	3.4	42
44	M3 Muscarinic Receptor Interaction with Phospholipase C β_2 Determines Its Signaling Efficiency. <i>Journal of Biological Chemistry</i> , 2014, 289, 11206-11218.	3.4	17
45	Simultaneous Adrenal and Cardiac G-Protein-Coupled Receptor-G $\beta\gamma$ Inhibition Halts Heart Failure Progression. <i>Journal of the American College of Cardiology</i> , 2014, 63, 2549-2557.	2.8	46
46	Lysophosphatidic acid induces vasodilation mediated by LPA 1 receptors, phospholipase C, and endothelial nitric oxide synthase. <i>FASEB Journal</i> , 2014, 28, 880-890.	0.5	20
47	Identification of Activators of ERK5 Transcriptional Activity by High-Throughput Screening and the Role of Endothelial ERK5 in Vasoprotective Effects Induced by Statins and Antimalarial Agents. <i>Journal of Immunology</i> , 2014, 193, 3803-3815.	0.8	51
48	PLC μ , PKD1, and SSH1L Transduce RhoA Signaling to Protect Mitochondria from Oxidative Stress in the Heart. <i>Science Signaling</i> , 2013, 6, ra108.	3.6	54
49	Phospholipase C μ Hydrolyzes Perinuclear Phosphatidylinositol 4-Phosphate to Regulate Cardiac Hypertrophy. <i>Cell</i> , 2013, 153, 216-227.	28.9	150
50	Molecular targeting of G α and G $\beta\gamma$ subunits: a potential approach for cancer therapeutics. <i>Trends in Pharmacological Sciences</i> , 2013, 34, 290-298.	8.7	57
51	WDR26 Functions as a Scaffolding Protein to Promote G $\beta\gamma$ -mediated Phospholipase C β_2 (PLC β_2) Activation in Leukocytes. <i>Journal of Biological Chemistry</i> , 2013, 288, 16715-16725.	3.4	20
52	Phospholipase C ϵ links G protein-coupled receptor activation to inflammatory astrocytic responses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3609-3614.	7.1	70
53	Epac2 and PLC μ contribute to the inflammatory response to cigarette smoke in vivo. <i>FASEB Journal</i> , 2013, 27, 1107.7.	0.5	0
54	G Protein-Coupled Receptor-Mediated Activation of p110 β by G $\beta\gamma$ Is Required for Cellular Transformation and Invasiveness. <i>Science Signaling</i> , 2012, 5, ra89.	3.6	127

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55	Role of phospholipase C β in physiological phosphoinositide signaling networks. Cellular Signalling, 2012, 24, 1333-1343.	3.6	130
56	Protease-activated receptor 1 (PAR1) coupling to Gq/11 but not to Gi/o or G12/13 is mediated by discrete amino acids within the receptor second intracellular loop. Cellular Signalling, 2012, 24, 1351-1360.	3.6	34
57	Direct Physical Scaffolding of Muscarinic M3 Receptor Signal Transduction Pathways. FASEB Journal, 2012, 26, 663.5.	0.5	0
58	Taking the heart failure battle inside the cell: Small molecule targeting of G $\beta\gamma$ subunits. Journal of Molecular and Cellular Cardiology, 2011, 51, 462-467.	1.9	29
59	Phospholipase C δ Scaffolds to Muscle-specific A Kinase Anchoring Protein (mAKAP β) and Integrates Multiple Hypertrophic Stimuli in Cardiac Myocytes. Journal of Biological Chemistry, 2011, 286, 23012-23021.	3.4	86
60	Understanding Molecular Recognition by G protein $\beta\gamma$ Subunits on the Path to Pharmacological Targeting. Molecular Pharmacology, 2011, 80, 551-557.	2.3	71
61	Purification of Heterotrimeric G Protein $\beta\gamma$ Subunits by GST-Ric-8 Association. Journal of Biological Chemistry, 2011, 286, 2625-2635.	3.4	59
62	Phospholipase C β links Epac2 activation to the potentiation of glucose-stimulated insulin secretion from mouse islets of Langerhans. Islets, 2011, 3, 121-128.	1.8	68
63	Two Distinct Sites on G $\beta\gamma$ are Required for Binding to the N-Terminus Versus the Activation Site on Adenylyl Cyclase. FASEB Journal, 2011, 25, .	0.5	0
64	Phospholipase C β Regulates Multiple Agonists-Induced Cardiomyocyte Hypertrophy in Neonatal Rat Ventricular Myocytes By Binding To mAKAP (Muscle A-kinase Anchoring Protein) And Generating Local IP3-Dependent Nuclear Calcium Release. FASEB Journal, 2011, 25, 1012.1.	0.5	0
65	NMR analysis of G-protein $\beta\gamma$ subunit complexes reveals a dynamic G β -G γ subunit interface and multiple protein recognition modes. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 639-644.	7.1	25
66	Epac2-dependent mobilization of intracellular Ca ²⁺ by glucagon-like peptide-1 receptor agonist exendin-4 is disrupted in β -cells of phospholipase C δ knockout mice. Journal of Physiology, 2010, 588, 4871-4889.	2.9	61
67	Small Molecule Disruption of G $\beta\gamma$ Signaling Inhibits the Progression of Heart Failure. Circulation Research, 2010, 107, 532-539.	4.5	117
68	Identification and Characterization of Unique Proline-rich Peptides Binding to the Mitochondrial Fission Protein hFis1. Journal of Biological Chemistry, 2010, 285, 620-630.	3.4	16
69	Epac and Phospholipase C β Regulate Ca ²⁺ Release in the Heart by Activation of Protein Kinase C β and Calcium-Calmodulin Kinase II. Journal of Biological Chemistry, 2009, 284, 1514-1522.	3.4	171
70	Regulation of Immature Dendritic Cell Migration by RhoA Guanine Nucleotide Exchange Factor Arhgef5. Journal of Biological Chemistry, 2009, 284, 28599-28606.	3.4	56
71	Supraspinal G $\beta\gamma$ -dependent stimulation of PLC β originating from G inhibitory protein β 4 opioid receptor-coupling is necessary for morphine induced acute hyperalgesia. Journal of Neurochemistry, 2009, 111, 171-180.	3.9	35
72	Evaluating Docking Methods for Prediction of Binding Affinities of Small Molecules to the G Protein $\beta\gamma$ Subunits. Journal of Chemical Information and Modeling, 2009, 49, 437-443.	5.4	13

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73	Biophysical characterization of G α hot spot-binding small molecules: explaining G α hot spot-binding effector selectivity. FASEB Journal, 2009, 23, 583.3.	0.5	0
74	Phospholipase C μ (PLC μ)-mediated activation of classical transient receptor potential 6 (TRPC6) increases barrier function of glomerular podocytes. FASEB Journal, 2009, 23, 804.12.	0.5	0
75	Regulation of the G protein $\beta\gamma$ subunits through the covalent modification of G α . FASEB Journal, 2009, 23, 583.4.	0.5	0
76	A Novel G α -Subunit Inhibitor Selectively Modulates μ -Opioid-Dependent Antinociception and Attenuates Acute Morphine-Induced Antinociceptive Tolerance and Dependence. Journal of Neuroscience, 2008, 28, 12183-12189.	3.6	67
77	G Protein $\beta\gamma$ Subunits as Targets for Small Molecule Therapeutic Development. Combinatorial Chemistry and High Throughput Screening, 2008, 11, 382-395.	1.1	42
78	PLC μ Selectively Transduces Thrombin Versus LPA Signals to Astrocyte Proliferation Through Rap1 and Rho. FASEB Journal, 2008, 22, 805.11.	0.5	0
79	Analysis of direct binding of small molecules to G protein $\beta\gamma$ subunits: biophysical analysis and binding site mapping. FASEB Journal, 2008, 22, 907.3.	0.5	0
80	Redox Regulation of G protein $\beta\gamma$ Subunits. FASEB Journal, 2008, 22, 908.12.	0.5	0
81	Subunit Dissociation and Diffusion Determine the Subcellular Localization of Rod and Cone Transducins. Journal of Neuroscience, 2007, 27, 5484-5494.	3.6	66
82	Epac-mediated Activation of Phospholipase C ϵ Plays a Critical Role in β -Adrenergic Receptor-dependent Enhancement of Ca ²⁺ Mobilization in Cardiac Myocytes. Journal of Biological Chemistry, 2007, 282, 5488-5495.	3.4	158
83	Analysis and Pharmacological Targeting of Phospholipase C β Interactions with G Proteins. Methods in Enzymology, 2007, 434, 29-48.	1.0	7
84	Signaling by a Non-dissociated Complex of G Protein $\beta\gamma$ and α Subunits Stimulated by a Receptor-independent Activator of G Protein Signaling, AGS8. Journal of Biological Chemistry, 2007, 282, 19938-19947.	3.4	38
85	Phospholipase C μ is a nexus for Rho and Rap-mediated G protein-coupled receptor-induced astrocyte proliferation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 15543-15548.	7.1	67
86	Positional cloning uncovers mutations in PLCE1 responsible for a nephrotic syndrome variant that may be reversible. Nature Genetics, 2006, 38, 1397-1405.	21.4	510
87	Differential Targeting of G α -Subunit Signaling with Small Molecules. Science, 2006, 312, 443-446.	12.6	214
88	A Docking Site for G Protein $\beta\gamma$ Subunits on the Parathyroid Hormone 1 Receptor Supports Signaling through Multiple Pathways. Molecular Endocrinology, 2006, 20, 136-146.	3.7	50
89	G-protein-coupled Receptor Agonists Activate Endogenous Phospholipase C μ and Phospholipase C β 3 in a Temporally Distinct Manner. Journal of Biological Chemistry, 2006, 281, 2639-2648.	3.4	76
90	Identification of a receptor-independent activator of G protein signaling (AGS8) in ischemic heart and its interaction with G $\beta\gamma$. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 797-802.	7.1	66

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91	GPCR Independent Signaling by AGS8 Protein Through Formation of Quaternary Complex with G α 13, G β and PLC β 2. FASEB Journal, 2006, 20, A257.	0.5	0
92	Ric-8 Enhances G Protein β -Dependent Signaling in Response to β -Binding Peptides in Intact Cells. Molecular Pharmacology, 2005, 68, 129-136.	2.3	33
93	Phospholipase C μ Modulates β -Adrenergic Receptor-Dependent Cardiac Contraction and Inhibits Cardiac Hypertrophy. Circulation Research, 2005, 97, 1305-1313.	4.5	118
94	Regulatory Interactions between the Amino Terminus of G-protein β Subunits and the Catalytic Domain of Phospholipase C β 2. Journal of Biological Chemistry, 2005, 280, 10174-10181.	3.4	54
95	Structural and Molecular Characterization of a Preferred Protein Interaction Surface on G Protein β Subunits. Biochemistry, 2005, 44, 10593-10604.	2.5	74
96	Purification of Phospholipase C β and Phospholipase C μ from Sf9 Cells. , 2004, 237, 55-64.		6
97	G α 13 Activation of Src Induces Caveolae-mediated Endocytosis in Endothelial Cells. Journal of Biological Chemistry, 2004, 279, 48055-48062.	3.4	86
98	Hormonal regulation of phospholipase Cepsilon through distinct and overlapping pathways involving G12 and Ras family G-proteins. Biochemical Journal, 2004, 378, 129-139.	3.7	99
99	Directional Sensing Requires G α 13-Mediated PAK1 and PIX β -Dependent Activation of Cdc42. Cell, 2003, 114, 215-227.	28.9	362
100	Stimulation of Cellular Signaling and G Protein Subunit Dissociation by G Protein β Subunit-binding Peptides. Journal of Biological Chemistry, 2003, 278, 19634-19641.	3.4	64
101	Receptor- and Nucleotide Exchange-independent Mechanisms for Promoting G Protein Subunit Dissociation. Journal of Biological Chemistry, 2003, 278, 34747-34750.	3.4	59
102	Discovery of Ligands for β Subunits from Phage-Displayed Peptide Libraries. Methods in Enzymology, 2002, 344, 557-576.	1.0	7
103	Characterization of a Phospholipase C β 2-Binding Site Near the Amino-terminal Coiled-coil of G Protein β Subunits. Journal of Biological Chemistry, 2001, 276, 11246-11251.	3.4	19
104	Role of the β Subunit Prenyl Moiety in G Protein β Complex Interaction with Phospholipase C β 2. Journal of Biological Chemistry, 2001, 276, 41797-41802.	3.4	36
105	Selective Role of G Protein β Subunits in Receptor Interaction. Journal of Biological Chemistry, 2000, 275, 38961-38964.	3.4	47
106	Roles of PLC-2 and -3 and PI3K in Chemoattractant-Mediated Signal Transduction. Science, 2000, 287, 1046-1049.	12.6	817
107	Identification of a Structural Element in Phospholipase C β 2 That Interacts with G Protein β Subunits. Journal of Biological Chemistry, 1998, 273, 7148-7154.	3.4	72
108	Pertussis Toxin-sensitive Activation of Phospholipase C by the C5a and fMet-Leu-Phe Receptors. Journal of Biological Chemistry, 1996, 271, 13430-13434.	3.4	121

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109	Phospholipase C $\hat{I}2$ Association with Phospholipid Interfaces Assessed by Fluorescence Resonance Energy Transfer. <i>Journal of Biological Chemistry</i> , 1996, 271, 25071-25078.	3.4	60
110	A Tyrosine Kinase Signaling Pathway Accounts for the Majority of Phosphatidylinositol 3,4,5-Trisphosphate Formation in Chemoattractant-stimulated Human Neutrophils. <i>Journal of Biological Chemistry</i> , 1996, 271, 25204-25207.	3.4	109
111	Regulation of phospholipase C by G proteins. <i>Trends in Biochemical Sciences</i> , 1992, 17, 502-506.	7.5	197
112	Purification and characterization of large and small subunits of ribulose 1,5-bisphosphate carboxylase expressed separately in <i>Escherichia coli</i> . <i>Archives of Biochemistry and Biophysics</i> , 1991, 286, 6-13.	3.0	18
113	HPLC Separation and Indirect Ultraviolet Detection of Phosphorylated Sugars. <i>Plant Physiology</i> , 1988, 86, 615-618.	4.8	16