Brian K Kobilka

List of Publications by Year
in descending order

270 papers	55,347 citations	1536 106 h-index	1254 226 g-index
282 all docs	282 docs citations	282 times ranked	29111 citing authors

#	Article	IF	Citations
1	High-Resolution Crystal Structure of an Engineered Human Î² ₂ -Adrenergic G Proteinâ€“Coupled Receptor. Science, 2007, 318, 1258-1265.	12.6	3,112
2	Crystal structure of the Î²2 adrenergic receptorâ€“Gs protein complex. Nature, 2011, 477, 549-555.	27.8	2,712
3	The structure and function of G-protein-coupled receptors. Nature, 2009, 459, 356-363.	27.8	1,982
4	Crystal structure of the human Î²2 adrenergic G-protein-coupled receptor. Nature, 2007, 450, 383-387.	27.8	1,832
5	Structure of a nanobody-stabilized active state of the Î²2 adrenoceptor. Nature, 2011, 469, 175-180.	27.8	1,523
6	GPCR Engineering Yields High-Resolution Structural Insights into Î² ₂ -Adrenergic Receptor Function. Science, 2007, 318, 1266-1273.	12.6	1,324
7	Cloning of the gene and cDNA for mammalian Î²-adrenergic receptor and homology with rhodopsin. Nature, 1986, 321, 75-79.	27.8	1,284
8	Crystal structure of the Âµ-opioid receptor bound to a morphinan antagonist. Nature, 2012, 485, 321-326.	27.8	1,202
9	Functional Selectivity and Classical Concepts of Quantitative Pharmacology. Journal of Pharmacology and Experimental Therapeutics, 2007, 320, 1-13.	2.5	997
10	Activation and allosteric modulation of a muscarinic acetylcholine receptor. Nature, 2013, 504, 101-106.	27.8	779
11	Structure-based discovery of opioid analgesics with reduced side effects. Nature, 2016, 537, 185-190.	27.8	744
12	Structural insights into Âµ-opioid receptor activation. Nature, 2015, 524, 315-321.	27.8	743
13	Structure and function of an irreversible agonist-Î²2 adrenoceptor complex. Nature, 2011, 469, 236-240.	27.8	741
14	Î²AR Signaling Required for Diet-Induced Thermogenesis and Obesity Resistance. Science, 2002, 297, 843-845.	12.6	738
15	The Molecular Basis of G Proteinâ€“Coupled Receptor Activation. Annual Review of Biochemistry, 2018, 87, 897-919.	11.1	734
16	The Dynamic Process of Î²2-Adrenergic Receptor Activation. Cell, 2013, 152, 532-542.	28.9	723
17	Structure and dynamics of the M3 muscarinic acetylcholine receptor. Nature, 2012, 482, 552-556.	27.8	714
18	Behavioural and cardiovascular effects of disrupting the angiotensin II type-2 receptor gene in mice. Nature, 1995, 377, 744-747.	27.8	713

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19	Structure of the human M2 muscarinic acetylcholine receptor bound to an antagonist. Nature, 2012, 482, 547-551.	27.8	706
20	Conformational complexity of G-protein-coupled receptors. Trends in Pharmacological Sciences, 2007, 28, 397-406.	8.7	646
21	Structure and dynamics of GPCR signaling complexes. Nature Structural and Molecular Biology, 2018, 25, 4-12.	8.2	638
22	The genomic clone G-21 which resembles a Î²-adrenergic receptor sequence encodes the 5-HT1A receptor. Nature, 1988, 335, 358-360.	27.8	611
23	Structure of the Î´-opioid receptor bound to naltrindole. Nature, 2012, 485, 400-404.	27.8	607
24	A monomeric G protein-coupled receptor isolated in a high-density lipoprotein particle efficiently activates its G protein. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7682-7687.	7.1	593
25	A general protocol for the generation of Nanobodies for structural biology. Nature Protocols, 2014, 9, 674-693.	12.0	571
26	Structural Insights into the Dynamic Process of Î² 2 -Adrenergic Receptor Signaling. Cell, 2015, 161, 1101-1111.	28.9	562
27	Structure of the Âµ-opioid receptorâ€“Gi protein complex. Nature, 2018, 558, 547-552.	27.8	527
28	An intronless gene encoding a potential member of the family of receptors coupled to guanine nucleotide regulatory proteins. Nature, 1987, 329, 75-79.	27.8	513
29	G Protein-coupled Receptors. Journal of Biological Chemistry, 1998, 273, 17979-17982.	3.4	485
30	Two functionally distinct Î±2-adrenergic receptors regulate sympathetic neurotransmission. Nature, 1999, 402, 181-184.	27.8	479
31	G protein coupled receptor structure and activation. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 794-807.	2.6	473
32	Cryo-EM structure of the activated GLP-1 receptor in complex with a G protein. Nature, 2017, 546, 248-253.	27.8	465
33	Removal of phosphorylation sites from the Î²2-adrenergic receptor delays onset of agonist-promoted desensitization. Nature, 1988, 333, 370-373.	27.8	439
34	Adrenaline-activated structure of Î²2-adrenoceptor stabilized by an engineered nanobody. Nature, 2013, 502, 575-579.	27.8	436
35	Visualization of arrestin recruitment by a G-protein-coupled receptor. Nature, 2014, 512, 218-222.	27.8	433
36	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. Nature, 2010, 463, 108-112.	27.8	432

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37	Phase-plate cryo-EM structure of a class B GPCRâ€“G-protein complex. Nature, 2017, 546, 118-123.	27.8	424
38	High-resolution crystal structure of human protease-activated receptor 1. Nature, 2012, 492, 387-392.	27.8	416
39	Maltoseâ€“neopentyl glycol (MNG) amphiphiles for solubilization, stabilization and crystallization of membrane proteins. Nature Methods, 2010, 7, 1003-1008.	19.0	397
40	Structure of active Î²-arrestin-1 bound to a G-protein-coupled receptor phosphopeptide. Nature, 2013, 497, 137-141.	27.8	393
41	Counting Low-Copy Number Proteins in a Single Cell. Science, 2007, 315, 81-84.	12.6	374
42	Functionally Different Agonists Induce Distinct Conformations in the G Protein Coupling Domain of the Î²2Adrenergic Receptor. Journal of Biological Chemistry, 2001, 276, 24433-24436.	3.4	347
43	Conformational changes in the G protein Gs induced by the Î²2 adrenergic receptor. Nature, 2011, 477, 611-615.	27.8	339
44	Muscarinic acetylcholine receptors: novel opportunities for drug development. Nature Reviews Drug Discovery, 2014, 13, 549-560.	46.4	337
45	Linkage of Î²1-adrenergic stimulation to apoptotic heart cell death through protein kinase Aâ€“independent activation of Ca2+/calmodulin kinase II. Journal of Clinical Investigation, 2003, 111, 617-625.	8.2	336
46	Structure of a Signaling Cannabinoid Receptor 1-G Protein Complex. Cell, 2019, 176, 448-458.e12.	28.9	323
47	Coupling ligand structure to specific conformational switches in the Î²2-adrenoceptor. , 2006, 2, 417-422.		318
48	Sequential Binding of Agonists to the Î²2 Adrenoceptor. Journal of Biological Chemistry, 2004, 279, 686-691.	3.4	311
49	Targeted Disruption of the Î²2 Adrenergic Receptor Gene. Journal of Biological Chemistry, 1999, 274, 16694-16700.	3.4	300
50	ERK Plays a Regulatory Role in Induction of LTP by Theta Frequency Stimulation and Its Modulation by Î²-Adrenergic Receptors. Neuron, 1999, 24, 715-726.	8.1	300
51	Gene targeting â€" homing in on Î±2-adrenoceptor-subtype function. Trends in Pharmacological Sciences, 1997, 18, 211-219.	8.7	298
52	Abnormal Regulation of the Sympathetic Nervous System in Î±_{2A}-Adrenergic Receptor Knockout Mice. Molecular Pharmacology, 1999, 56, 154-161.	2.3	296
53	Structure-based discovery of Î² ₂ -adrenergic receptor ligands. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6843-6848.	7.1	290
54	Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation. Nature, 2016, 535, 448-452.	27.8	290

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55	Cloning, characterization, and expression of two angiotensin receptor (AT-1) isoforms from the mouse genome. Biochemical and Biophysical Research Communications, 1992, 185, 253-259.	2.1	283
56	Crystal structures of the M1 and M4 muscarinic acetylcholine receptors. Nature, 2016, 531, 335-340.	27.8	272
57	Single-molecule analysis of ligand efficacy in Î²2ARâ€“G-protein activation. Nature, 2017, 547, 68-73.	27.8	265
58	Structure of the neurotensin receptor 1 in complex with Î²-arrestin 1. Nature, 2020, 579, 303-308.	27.8	260
59	Structural Instability of a Constitutively Active G Protein-coupled Receptor. Journal of Biological Chemistry, 1997, 272, 2587-2590.	3.4	259
60	Fluorescent Labeling of Purified Î²2 Adrenergic Receptor. Journal of Biological Chemistry, 1995, 270, 28268-28275.	3.4	258
61	Structure-based drug screening for G-protein-coupled receptors. Trends in Pharmacological Sciences, 2012, 33, 268-272.	8.7	258
62	Allosteric regulation of G proteinâ€“coupled receptor activity by phospholipids. Nature Chemical Biology, 2016, 12, 35-39.	8.0	251
63	Structural basis for nucleotide exchange in heterotrimeric G proteins. Science, 2015, 348, 1361-1365.	12.6	250
64	Cardiovascular and Metabolic Alterations in Mice Lacking Both Î²1- and Î²2-Adrenergic Receptors. Journal of Biological Chemistry, 1999, 274, 16701-16708.	3.4	245
65	Structures of the M1 and M2 muscarinic acetylcholine receptor/G-protein complexes. Science, 2019, 364, 552-557.	12.6	244
66	Probing the Î²2 Adrenoceptor Binding Site with Catechol Reveals Differences in Binding and Activation by Agonists and Partial Agonists. Journal of Biological Chemistry, 2005, 280, 22165-22171.	3.4	242
67	Allosteric coupling from G protein to the agonist-binding pocket in GPCRs. Nature, 2016, 535, 182-186.	27.8	235
68	Structural insights into the activation of metabotropic glutamate receptors. Nature, 2019, 566, 79-84.	27.8	233
69	Energy Landscapes as a Tool to Integrate GPCR Structure, Dynamics, and Function. Physiology, 2010, 25, 293-303.	3.1	227
70	Propagation of conformational changes during Î¼-opioid receptor activation. Nature, 2015, 524, 375-378.	27.8	227
71	Caveolar Localization Dictates Physiologic Signaling of Î²2-Adrenoceptors in Neonatal Cardiac Myocytes. Journal of Biological Chemistry, 2002, 277, 34280-34286.	3.4	219
72	The effect of ligand efficacy on the formation and stability of a GPCR-G protein complex. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9501-9506.	7.1	218

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73	New G-protein-coupled receptor crystal structures: insights and limitations. Trends in Pharmacological Sciences, 2008, 29, 79-83.	8.7	217
74	Intracellular Trafficking of Angiotensin II and its AT₁and AT₂Receptors: Evidence for Selective Sorting of Receptor and Ligand. Molecular Endocrinology, 1997, 11, 1266-1277.	3.7	210
75	Structural flexibility of the GÎ±s Î±-helical domain in the Î² ₂ -adrenoceptor Gs complex. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16086-16091.	7.1	204
76	The role of protein dynamics in GPCR function: insights from the Î²2AR and rhodopsin. Current Opinion in Cell Biology, 2014, 27, 136-143.	5.4	204
77	Nanobodies to Study G Proteinâ€“Coupled Receptor Structure and Function. Annual Review of Pharmacology and Toxicology, 2017, 57, 19-37.	9.4	201
78	Conformational transitions of a neurotensin receptorÂ1â€“Gi1Âcomplex. Nature, 2019, 572, 80-85.	27.8	199
79	Angiotensin Analogs with Divergent Bias Stabilize Distinct Receptor Conformations. Cell, 2019, 176, 468-478.e11.	28.9	194
80	Myocyte Adrenoceptor Signaling Pathways. Science, 2003, 300, 1530-1532.	12.6	192
81	Mutation of the Î±_{2A}-Adrenoceptor Impairs Working Memory Performance and Annuls Cognitive Enhancement by Guanfacine. Journal of Neuroscience, 2002, 22, 8771-8777.	3.6	191
82	Subtype-Specific Intracellular Trafficking of Î±₂-Adrenergic Receptors. Molecular Pharmacology, 1997, 51, 711-720.	2.3	184
83	A new era of GPCR structural and chemical biology. Nature Chemical Biology, 2012, 8, 670-673.	8.0	184
84	Ligand-regulated oligomerization of Î²2-adrenoceptors in a model lipid bilayer. EMBO Journal, 2009, 28, 3315-3328.	7.8	172
85	Adrenergic Î±_{2C}-Receptors Modulate the Acoustic Startle Reflex, Prepulse Inhibition, and Aggression in Mice. Journal of Neuroscience, 1998, 18, 3035-3042.	3.6	166
86	Assembly of a GPCR-G Protein Complex. Cell, 2019, 177, 1232-1242.e11.	28.9	163
87	Structural insights into adrenergic receptor function and pharmacology. Trends in Pharmacological Sciences, 2011, 32, 213-218.	8.7	160
88	Development of an antibody fragment that stabilizes GPCR/G-protein complexes. Nature Communications, 2018, 9, 3712.	12.8	157
89	The Role of Ligands on the Equilibria Between Functional States of a G Protein-Coupled Receptor. Journal of the American Chemical Society, 2013, 135, 9465-9474.	13.7	156
90	Structural insights into binding specificity, efficacy and bias of a Î²2AR partial agonist. Nature Chemical Biology, 2018, 14, 1059-1066.	8.0	155

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91	The Structural Basis of Gâ€Proteinâ€Coupled Receptor Signaling (Nobel Lecture). Angewandte Chemie - International Edition, 2013, 52, 6380-6388.	13.8	152
92	Genetic Alteration of Î±_{2C}-Adrenoceptor Expression in Mice: Influence on Locomotor, Hypothermic, and Neurochemical Effects of Dexmedetomidine, a Subtype-Nonselective Î±₂-Adrenoceptor Agonist. Molecular Pharmacology, 1997, 51, 36-46.	2.3	149
93	Signaling from Î²1- and Î²2-adrenergic receptors is defined by differential interactions with PDE4. EMBO Journal, 2008, 27, 384-393.	7.8	148
94	Mechanism of intracellular allosteric Î²2AR antagonist revealed by X-ray crystal structure. Nature, 2017, 548, 480-484.	27.8	148
95	Cholesterol increases kinetic, energetic, and mechanical stability of the human Î² ₂ -adrenergic receptor. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E3463-72.	7.1	142
96	Structure and Conformational Changes in the C-terminal Domain of the Î²2-Adrenoceptor. Journal of Biological Chemistry, 2007, 282, 13895-13905.	3.4	141
97	Skeletal muscle hypertrophy and anti-atrophy effects of clenbuterol are mediated by the ?2-adrenergic receptor. Muscle and Nerve, 2002, 25, 729-734.	2.2	136
98	Structural and Functional Analysis of a Î²2-Adrenergic Receptor Complex with GRK5. Cell, 2017, 169, 407-421.e16.	28.9	132
99	Antinociceptive Action of Nitrous Oxide Is Mediated by Stimulation of Noradrenergic Neurons in the Brainstem and Activation of Î±_{2B}Adrenoceptors. Journal of Neuroscience, 2000, 20, 9242-9251.	3.6	130
100	GPCRâ€"GÎ± fusion proteins: molecular analysis of receptorâ€"G-protein coupling. Trends in Pharmacological Sciences, 1999, 20, 383-389.	8.7	127
101	A monoclonal antibody for G proteinâ€"coupled receptor crystallography. Nature Methods, 2007, 4, 927-929.	19.0	125
102	Goniometer-based femtosecond crystallography with X-ray free electron lasers. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17122-17127.	7.1	122
103	Regulation of<i>Î²</i>₂-Adrenergic Receptor Function by Conformationally Selective Single-Domain Intrabodies. Molecular Pharmacology, 2014, 85, 472-481.	2.3	121
104	Structural Insights into the Process of GPCR-G Protein Complex Formation. Cell, 2019, 177, 1243-1251.e12.	28.9	121
105	A New Class of Amphiphiles Bearing Rigid Hydrophobic Groups for Solubilization and Stabilization of Membrane Proteins. Chemistry - A European Journal, 2012, 18, 9485-9490.	3.3	120
106	Phosphodiesterase 4D is required for Â2 adrenoceptor subtype-specific signaling in cardiac myocytes. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 909-914.	7.1	116
107	Diverse GPCRs exhibit conserved water networks for stabilization and activation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3288-3293.	7.1	116
108	Crystal structure of the adenosine A _{2A} receptor bound to an antagonist reveals a potential allosteric pocket. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2066-2071.	7.1	114

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109	Î²2-Adrenergic Receptor-induced p38 MAPK Activation Is Mediated by Protein Kinase A Rather than by Gi or GÎ²Î³ in Adult Mouse Cardiomyocytes. Journal of Biological Chemistry, 2000, 275, 40635-40640.	3.4	113
110	N-Terminal T4 Lysozyme Fusion Facilitates Crystallization of a G Protein Coupled Receptor. PLoS ONE, 2012, 7, e46039.	2.5	112
111	Modified T4 Lysozyme Fusion Proteins Facilitate G Protein-Coupled Receptor Crystallogenesis. Structure, 2014, 22, 1657-1664.	3.3	112
112	Antithetic regulation by Î²-adrenergic receptors of Gq receptor signaling via phospholipase C underlies the airway Î²-agonist paradox. Journal of Clinical Investigation, 2003, 112, 619-626.	8.2	112
113	A fluorescent probe designed for studying protein conformational change. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 965-970.	7.1	110
114	Effects of Guanine, Inosine, and Xanthine Nucleotides on Î²₂-Adrenergic Receptor/G_sInteractions: Evidence for Multiple Receptor Conformations. Molecular Pharmacology, 1999, 56, 348-358.	2.3	108
115	The Effect of pH on Î²2 Adrenoceptor Function. Journal of Biological Chemistry, 2000, 275, 3121-3127.	3.4	107
116	Imaging G proteinâ€"coupled receptors while quantifying their ligand-binding free-energy landscape. Nature Methods, 2015, 12, 845-851.	19.0	106
117	Transmembrane Regions V and VI of the Human Luteinizing Hormone Receptor Are Required for Constitutive Activation by a Mutation in the Third Intracellular Loop. Journal of Biological Chemistry, 1996, 271, 22470-22478.	3.4	105
118	Role of the Î±2B-Adrenergic Receptor in the Development of Salt-Induced Hypertension. Hypertension, 1999, 33, 14-17.	2.7	105
119	G Protein-Coupled Receptors: Functional and Mechanistic Insights Through Altered Gene Expression. Physiological Reviews, 1998, 78, 35-52.	28.8	104
120	Saving the Endangered Physician-Scientist â€" A Plan for Accelerating Medical Breakthroughs. New England Journal of Medicine, 2019, 381, 399-402.	27.0	104
121	Allosteric Modulation of Î²2-Adrenergic Receptor by Zn2+. Molecular Pharmacology, 2002, 61, 65-72.	2.3	103
122	Dosage-dependent switch from G protein-coupled to G protein-independent signaling by a GPCR. EMBO Journal, 2007, 26, 53-64.	7.8	103
123	Structural insights into differences in G protein activation by family A and family B GPCRs. Science, 2020, 369, .	12.6	103
124	How GPCR Phosphorylation Patterns Orchestrate Arrestin-Mediated Signaling. Cell, 2020, 183, 1813-1825.e18.	28.9	100
125	The PDZ Binding Motif of the Î²1 Adrenergic Receptor Modulates Receptor Trafficking and Signaling in Cardiac Myocytes. Journal of Biological Chemistry, 2002, 277, 33783-33790.	3.4	99
126	Activation of the Luteinizing Hormone Receptor Following Substitution of Ser-277 with Selective Hydrophobic Residues in the Ectodomain Hinge Region. Journal of Biological Chemistry, 2000, 275, 30264-30271.	3.4	96

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127	Differential Distribution of Î²-Adrenergic Receptor Subtypes in Blood Vessels of Knockout Mice Lacking Î²1- or Î²2-Adrenergic Receptors. Molecular Pharmacology, 2001, 60, 955-962.	2.3	95
128	Role of Detergents in Conformational Exchange of a G Protein-coupled Receptor. Journal of Biological Chemistry, 2012, 287, 36305-36311.	3.4	94
129	Organization of Î²-adrenoceptor signaling compartments by sympathetic innervation of cardiac myocytes. Journal of Cell Biology, 2007, 176, 521-533.	5.2	93
130	Conformational Dynamics of Single G Protein-Coupled Receptors in Solution. Journal of Physical Chemistry B, 2011, 115, 13328-13338.	2.6	93
131	Crystal structure of the natural anion-conducting channelrhodopsin GtACR1. Nature, 2018, 561, 343-348.	27.8	93
132	Reconstitution of beta2-adrenoceptor-GTP-binding-protein interaction in Sf9 cells . High coupling efficiency in a beta2-adrenoceptor-Gsalpha fusion protein. FEBS Journal, 1998, 255, 369-382.	0.2	91
133	<i>In meso in situ</i>serial X-ray crystallography of soluble and membrane proteins at cryogenic temperatures. Acta Crystallographica Section D: Structural Biology, 2016, 72, 93-112.	2.3	91
134	The PDZ-binding motif of the Â2-adrenoceptor is essential for physiologic signaling and trafficking in cardiac myocytes. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 10776-10781.	7.1	88
135	Ligand-Specific Interactions Modulate Kinetic, Energetic, and Mechanical Properties of the Human Î²2 Adrenergic Receptor. Structure, 2012, 20, 1391-1402.	3.3	87
136	Tandem Facial Amphiphiles for Membrane Protein Stabilization. Journal of the American Chemical Society, 2010, 132, 16750-16752.	13.7	85
137	Identification of an Allosteric Binding Site for Zn2+on the Î²2 Adrenergic Receptor. Journal of Biological Chemistry, 2003, 278, 352-356.	3.4	84
138	Covalent agonists for studying G protein-coupled receptor activation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10744-10748.	7.1	82
139	Mechanism of Î² ₂ AR regulation by an intracellular positive allosteric modulator. Science, 2019, 364, 1283-1287.	12.6	82
140	Co-expression of Defective Luteinizing Hormone Receptor Fragments Partially Reconstitutes Ligand-induced Signal Generation. Journal of Biological Chemistry, 1997, 272, 25006-25012.	3.4	79
141	Activation of G Proteinâ€"Coupled Receptors. Advances in Protein Chemistry, 2007, 74, 137-166.	4.4	79
142	Glucose-Neopentyl Glycol (GNG) amphiphiles for membrane protein study. Chemical Communications, 2013, 49, 2287-2289.	4.1	79
143	INSIGHTS FROM IN VIVO MODIFICATION OF ADRENERGIC RECEPTOR GENE EXPRESSION. Annual Review of Pharmacology and Toxicology, 1998, 38, 351-373.	9.4	77
144	Structural basis for GLP-1 receptor activation by LY3502970, an orally active nonpeptide agonist. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29959-29967.	7.1	74

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145	G-protein activation by a metabotropic glutamate receptor. Nature, 2021, 595, 450-454.	27.8	73
146	Development and Characterization of Pepducins as Gs-biased Allosteric Agonists*. Journal of Biological Chemistry, 2014, 289, 35668-35684.	3.4	71
147	Arrangement of Transmembrane Domains in Adrenergic Receptors. Journal of Biological Chemistry, 1996, 271, 2387-2389.	3.4	70
148	A Novel Interaction between Adrenergic Receptors and the Î±-Subunit of Eukaryotic Initiation Factor 2B. Journal of Biological Chemistry, 1997, 272, 19099-19102.	3.4	70
149	Structural mechanisms of selectivity and gating in anion channelrhodopsins. Nature, 2018, 561, 349-354.	27.8	67
150	An improved yeast surface display platform for the screening of nanobody immune libraries. Scientific Reports, 2019, 9, 382.	3.3	66
151	The Ectodomain of the Luteinizing Hormone Receptor Interacts with Exoloop 2 to Constrain the Transmembrane Region. Journal of Biological Chemistry, 2002, 277, 3958-3964.	3.4	65
152	Binding pathway determines norepinephrine selectivity for the human Î²1AR over Î²2AR. Cell Research, 2021, 31, 569-579.	12.0	65
153	Heterozygous Â2A-adrenergic receptor mice unveil unique therapeutic benefits of partial agonists. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 12471-12476.	7.1	64
154	Nanoscale high-content analysis using compositional heterogeneities of single proteoliposomes. Nature Methods, 2014, 11, 931-934.	19.0	64
155	Identifying and quantifying two ligand-binding sites while imaging native human membrane receptors by AFM. Nature Communications, 2015, 6, 8857.	12.8	64
156	Structure-guided development of selective M3 muscarinic acetylcholine receptor antagonists. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12046-12050.	7.1	64
157	High-density grids for efficient data collection from multiple crystals. Acta Crystallographica Section D: Structural Biology, 2016, 72, 2-11.	2.3	62
158	Functional Immobilization of a Ligand-Activated G-Protein-Coupled Receptor. ChemBioChem, 2002, 3, 993-998.	2.6	60
159	A genetically engineered cell-based biosensor for functional classification of agents. Biosensors and Bioelectronics, 2001, 16, 571-577.	10.1	59
160	Structural insights into the subtype-selective antagonist binding to the M2 muscarinic receptor. Nature Chemical Biology, 2018, 14, 1150-1158.	8.0	59
161	Conformational Complexity and Dynamics in a Muscarinic Receptor Revealed by NMR Spectroscopy. Molecular Cell, 2019, 75, 53-65.e7.	9.7	59
162	Structural insights into probe-dependent positive allosterism of the GLP-1 receptor. Nature Chemical Biology, 2020, 16, 1105-1110.	8.0	58

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163	Derivation of Functional Antagonists Using N-Terminal Extracellular Domain of Gonadotropin and Thyrotropin Receptors. Molecular Endocrinology, 1997, 11, 1659-1668.	3.7	57
164	Spontaneous Activation of Î²₂- but Not Î²₁-Adrenoceptors Expressed in Cardiac Myocytes from Î²₁Î²₂Double Knockout Mice. Molecular Pharmacology, 2000, 58, 887-894.	2.3	57
165	Structure-based discovery of selective positive allosteric modulators of antagonists for the M ₂ muscarinic acetylcholine receptor. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2419-E2428.	7.1	57
166	Muscarinic Receptors as Model Targets and Antitargets for Structure-Based Ligand Discovery. Molecular Pharmacology, 2013, 84, 528-540.	2.3	56
167	Highly Branched Pentasaccharide-Bearing Amphiphiles for Membrane Protein Studies. Journal of the American Chemical Society, 2016, 138, 3789-3796.	13.7	56
168	Analysis of Biomolecular Interactions Using a Miniaturized Surface Plasmon Resonance Sensor. Analytical Chemistry, 2002, 74, 4570-4576.	6.5	54
169	Analysis of Î² ₂ AR-G _s and Î² ₂ AR-G _i complex formation by NMR spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23096-23105.	7.1	54
170	Agonist Binding: A Multistep Process: Fig. 1.. Molecular Pharmacology, 2004, 65, 1060-1062.	2.3	51
171	An allosteric modulator binds to a conformational hub in the Î²2 adrenergic receptor. Nature Chemical Biology, 2020, 16, 749-755.	8.0	51
172	Activation of the Î±2B adrenoceptor by the sedative sympatholytic dexmedetomidine. Nature Chemical Biology, 2020, 16, 507-512.	8.0	51
173	Cell-type Specific Targeting of the Î±2c-Adrenoceptor. Journal of Biological Chemistry, 2000, 275, 35424-35431.	3.4	50
174	Effective Application of Bicelles for Conformational Analysis of G Protein-Coupled Receptors by Hydrogen/Deuterium Exchange Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2015, 26, 808-817.	2.8	50
175	Alterations in dynamic heart rate control in the Î²1-adrenergic receptor knockout mouse. American Journal of Physiology - Heart and Circulatory Physiology, 1998, 274, H1184-H1193.	3.2	49
176	Novel Tripod Amphiphiles for Membrane Protein Analysis. Chemistry - A European Journal, 2013, 19, 15645-15651.	3.3	49
177	Î±2C-Adrenoceptor-Overexpressing Mice Are Impaired in Executing Nonspatial and Spatial Escape Strategies. Molecular Pharmacology, 1998, 54, 569-576.	2.3	47
178	Conformationally Preorganized Diastereomeric Norbornane-Based Maltosides for Membrane Protein Study: Implications of Detergent Kink for Micellar Properties. Journal of the American Chemical Society, 2017, 139, 3072-3081.	13.7	46
179	Accessible Mannitolâ€Based Amphiphiles (MNAs) for Membrane Protein Solubilisation and Stabilisation. Chemistry - A European Journal, 2016, 22, 7068-7073.	3.3	43
180	Structures of active melanocortin-4 receptorâ€“Gs-protein complexes with NDP-Î±-MSH and setmelanotide. Cell Research, 2021, 31, 1176-1189.	12.0	40

#	Article	IF	Citations
181	Cannabinoid receptor 1 antagonist genistein attenuates marijuana-induced vascular inflammation. Cell, 2022, 185, 1676-1693.e23.	28.9	40
182	Phospholipid biotinylation of polydimethylsiloxane (PDMS) for protein immobilization. Lab on A Chip, 2006, 6, 369.	6.0	39
183	Muscarinic acetylcholine receptor X-ray structures: potential implications for drug development. Current Opinion in Pharmacology, 2014, 16, 24-30.	3.5	38
184	Human Î²1- and Î²2-adrenergic receptors: structurally and functionally related receptors derived from distinct genes. Trends in Neurosciences, 1988, 11, 321-324.	8.6	37
185	Regulation of G-Protein Coupled Receptor Traffic by an Evolutionary Conserved Hydrophobic Signal. Traffic, 2010, 11, 560-578.	2.7	37
186	The new biology of drug receptors. Biochemical Pharmacology, 1989, 38, 2941-2948.	4.4	36
187	Structure and selectivity engineering of the M ₁ muscarinic receptor toxin complex. Science, 2020, 369, 161-167.	12.6	35
188	Crystal structure of dopamine D1 receptor in complex with G protein and a non-catechol agonist. Nature Communications, 2021, 12, 3305.	12.8	34
189	Î²-Adrenergic receptors and rhodopsin: shedding new light on an old subject. Trends in Pharmacological Sciences, 1986, 7, 444-448.	8.7	33
190	The Third Intracellular Loop and the Carboxyl Terminus of Î²2-Adrenergic Receptor Confer Spontaneous Activity of the Receptor. Molecular Pharmacology, 2003, 64, 1048-1058.	2.3	33
191	Toward understanding GPCR dimers. Nature Structural and Molecular Biology, 2004, 11, 691-692.	8.2	32
192	Differential targeting and function of Î±2A and Î±2C adrenergic receptor subtypes in cultured sympathetic neurons. Neuropharmacology, 2006, 51, 397-413.	4.1	32
193	Ligand Stabilization of the Î²2Adrenergic Receptor:Â Effect of DTT on Receptor Conformation Monitored by Circular Dichroism and Fluorescence Spectroscopyâ€. Biochemistry, 1996, 35, 14445-14451.	2.5	31
194	The cubicon method for concentrating membrane proteins in the cubic mesophase. Nature Protocols, 2017, 12, 1745-1762.	12.0	31
195	Viewing rare conformations of the Î² ₂ adrenergic receptor with pressure-resolved DEER spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 31824-31831.	7.1	31
196	Structural determinants of dual incretin receptor agonism by tirzepatide. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2116506119.	7.1	31
197	Examining the efficiency of receptor/G-protein coupling with a cleavable beta2-adrenoceptor-Gsalpha fusion protein. FEBS Journal, 1999, 260, 661-666.	0.2	30
198	Cloning and expression of the mouse homolog of the human Î±2-C2 adrenergic receptor. Biochemical and Biophysical Research Communications, 1992, 186, 1280-1287.	2.1	29

#	Article	IF	Citations
199	Asymmetric maltose neopentyl glycol amphiphiles for a membrane protein study: effect of detergent asymmetricity on protein stability. Chemical Science, 2019, 10, 1107-1116.	7.4	28
200	Use of fluorescence spectroscopy to study conformational changes in the Î²2-adrenoceptor. Methods in Enzymology, 2002, 343, 170-182.	1.0	26
201	Structureâ€Based Evolution of G Proteinâ€Biased Î¼â€Opioid Receptor Agonists. Angewandte Chemie - International Edition, 2022, 61, .	13.8	25
202	Identification of GPCR-Interacting Cytosolic Proteins Using HDL Particles and Mass Spectrometry-Based Proteomic Approach. PLoS ONE, 2013, 8, e54942.	2.5	23
203	Novel Insights into M3 Muscarinic Acetylcholine Receptor Physiology and Structure. Journal of Molecular Neuroscience, 2014, 53, 316-323.	2.3	23
204	Resorcinareneâ€Based Facial Glycosides: Implication of Detergent Flexibility on Membraneâ€Protein Stability. Chemistry - A European Journal, 2017, 23, 6724-6729.	3.3	23
205	Chemical Synthesis of a Full-Length G-Protein-Coupled Receptor Î²₂-Adrenergic Receptor with Defined Modification Patterns at the C-Terminus. Journal of the American Chemical Society, 2021, 143, 17566-17576.	13.7	23
206	Genetic Models of Human Vascular Disease. Circulation, 1995, 91, 521-531.	1.6	22
207	Derivation of Functional Antagonists Using N-Terminal Extracellular Domain of Gonadotropin and Thyrotropin Receptors. Molecular Endocrinology, 1997, 11, 1659-1668.	3.7	22
208	Dendronic trimaltoside amphiphiles (DTMs) for membrane protein study. Chemical Science, 2017, 8, 8315-8324.	7.4	21
209	Restricting the Mobility of GsÎ±:â€‰ Impact on Receptor and Effector Coupling. Biochemistry, 1999, 38, 13801-13809.	2.5	20
210	Single Proteoliposome High-Content Analysis Reveals Differences in the Homo-Oligomerization of GPCRs. Biophysical Journal, 2018, 115, 300-312.	0.5	19
211	<i>N</i>-Ethylmaleimide-Sensitive Factor Regulates Î²₂ Adrenoceptor Trafficking and Signaling in Cardiomyocytes. Molecular Pharmacology, 2007, 72, 429-439.	2.3	18
212	Structures of GÎ± Proteins in Complex with Their Chaperone Reveal Quality Control Mechanisms. Cell Reports, 2020, 30, 3699-3709.e6.	6.4	18
213	Structural basis for the constitutive activity and immunomodulatory properties of the Epstein-Barr virus-encoded G protein-coupled receptor BILF1. Immunity, 2021, 54, 1405-1416.e7.	14.3	18
214	Novel Xyleneâ€Linked Maltoside Amphiphiles (XMAs) for Membrane Protein Stabilisation. Chemistry - A European Journal, 2015, 21, 10008-10013.	3.3	17
215	Isomeric Detergent Comparison for Membrane Protein Stability: Importance of Interâ€Alkylâ€Chain Distance and Alkyl Chain Length. ChemBioChem, 2016, 17, 2334-2339.	2.6	17
216	Mesityleneâ€Cored Glucoside Amphiphiles (MGAs) for Membrane Protein Studies: Importance of Alkyl Chain Density in Detergent Efficacy. Chemistry - A European Journal, 2016, 22, 18833-18839.	3.3	17

#	Article	IF	Citations
217	Selective modulation of the cannabinoid type 1 (CB₁) receptor as an emerging platform for the treatment of neuropathic pain. MedChemComm, 2019, 10, 647-659.	3.4	17
218	Butane-1,2,3,4-tetraol-based amphiphilic stereoisomers for membrane protein study: importance of chirality in the linker region. Chemical Science, 2017, 8, 1169-1177.	7.4	16
219	An Engineered Lithocholateâ€Based Facial Amphiphile Stabilizes Membrane Proteins: Assessing the Impact of Detergent Customizability on Protein Stability. Chemistry - A European Journal, 2018, 24, 9860-9868.	3.3	16
220	1,3,5-Triazine-Cored Maltoside Amphiphiles for Membrane Protein Extraction and Stabilization. Journal of the American Chemical Society, 2019, 141, 19677-19687.	13.7	15
221	Conformationally flexible core-bearing detergents with a hydrophobic or hydrophilic pendant: Effect of pendant polarity on detergent conformation and membrane protein stability. Acta Biomaterialia, 2021, 128, 393-407.	8.3	15
222	Neuropeptide Y receptor 1 (NPY-Y1) expression in human heart failure and heart transplantation. Journal of the Autonomic Nervous System, 1998, 70, 84-91.	1.9	14
223	Pendant-bearing glucose-neopentyl glycol (P-GNG) amphiphiles for membrane protein manipulation: Importance of detergent pendant chain for protein stabilization. Acta Biomaterialia, 2020, 112, 250-261.	8.3	14
224	Cloning of the cDNA and Genes for the Hamster and Human Î²2-Adrenergic Receptors. Journal of Receptors and Signal Transduction, 1988, 8, 7-21.	1.2	13
225	Structural Properties of the Human Protease-Activated Receptor 1 Changing by a Strong Antagonist. Structure, 2018, 26, 829-838.e4.	3.3	13
226	Conformationally Restricted Monosaccharide-Cored Glycoside Amphiphiles: The Effect of Detergent Headgroup Variation on Membrane Protein Stability. ACS Chemical Biology, 2019, 14, 1717-1726.	3.4	13
227	Foldable Detergents for Membrane Protein Study: Importance of Detergent Core Flexibility in Protein Stabilization. Chemistry - A European Journal, 2022, 28, .	3.3	13
228	Die strukturelle Grundlage der Signaltransduktion mit Gâ€Proteinâ€gekoppelten Rezeptoren (Nobelâ€Aufsatz). Angewandte Chemie, 2013, 125, 6508-6517.	2.0	12
229	Selfâ€Assembly Behavior and Application of Terphenylâ€Cored Trimaltosides for Membraneâ€Protein Studies: Impact of Detergent Hydrophobic Group Geometry on Protein Stability. Chemistry - A European Journal, 2019, 25, 11545-11554.	3.3	12
230	New Malonate-Derived Tetraglucoside Detergents for Membrane Protein Stability. ACS Chemical Biology, 2020, 15, 1697-1707.	3.4	12
231	Site-Specific Fluorescence Labeling of the Î²2Adrenergic Receptor Amino Terminus. Analytical Biochemistry, 1997, 254, 88-95.	2.4	11
232	Efficient adenylyl cyclase activation by a Î²2-adrenoceptor-GiÎ±2 fusion protein. Biochemical and Biophysical Research Communications, 2002, 298, 824-828.	2.1	11
233	New penta-saccharide-bearing tripod amphiphiles for membrane protein structure studies. Analyst, The, 2017, 142, 3889-3898.	3.5	11
234	Tandem malonate-based glucosides (TMGs) for membrane protein structural studies. Scientific Reports, 2017, 7, 3963.	3.3	11

#	Article	IF	Citations
235	Trehalose-cored amphiphiles for membrane protein stabilization: importance of the detergent micelle size in GPCR stability. Organic and Biomolecular Chemistry, 2019, 17, 3249-3257.	2.8	11
236	Selfâ€Assembly Behaviors of a Pentaâ€Phenylene Maltoside and Its Application for Membrane Protein Study. Chemistry - an Asian Journal, 2019, 14, 1926-1931.	3.3	11
237	Atypical structural snapshots of human cytomegalovirus GPCR interactions with host G proteins. Science Advances, 2022, 8, eabl5442.	10.3	11
238	Translating science to medicine: The case for physician-scientists. Science Translational Medicine, 2022, 14, eabg7852.	12.4	11
239	Diastereomeric Cyclopentane-Based Maltosides (CPMs) as Tools for Membrane Protein Study. Journal of the American Chemical Society, 2020, 142, 21382-21392.	13.7	10
240	Vitamin E-based glycoside amphiphiles for membrane protein structural studies. Organic and Biomolecular Chemistry, 2018, 16, 2489-2498.	2.8	8
241	Conformational Plasticity of Human Protease-Activated Receptor 1 upon Antagonist- and Agonist-Binding. Structure, 2019, 27, 1517-1526.e3.	3.3	8
242	A cholesterol analog stabilizes the human Î² ₂ -adrenergic receptor nonlinearly with temperature. Science Signaling, 2022, 15, .	3.6	8
243	Examination of ligand-induced conformational changes in the Î²2 adrenergic receptor. Life Sciences, 1998, 62, 1509-1512.	4.3	7
244	PDZ-domain arrays for identifying components of GPCR signaling complexes. Trends in Pharmacological Sciences, 2006, 27, 509-511.	8.7	6
245	Rationally Engineered Tandem Facial Amphiphiles for Improved Membrane Protein Stabilization Efficacy. ChemBioChem, 2018, 19, 2225-2232.	2.6	6
246	Maltose-bis(hydroxymethyl)phenol (MBPs) and Maltose-tris(hydroxymethyl)phenol (MTPs) Amphiphiles for Membrane Protein Stability. ACS Chemical Biology, 2021, 16, 1779-1790.	3.4	6
247	Molecular and cellular biology of adrenergic receptors. Trends in Cardiovascular Medicine, 1991, 1, 189-194.	4.9	5
248	Steroidâ€Based Amphiphiles for Membrane Protein Study: The Importance of Alkyl Spacers for Protein Stability. ChemBioChem, 2018, 19, 1433-1443.	2.6	5
249	A comparative study of branched and linear mannitol-based amphiphiles on membrane protein stability. Analyst, The, 2018, 143, 5702-5710.	3.5	5
250	A device for separated and reversible coâ€culture of cardiomyocytes. Biotechnology Progress, 2010, 26, 1164-1171.	2.6	4
251	Glycoâ€Steroidal Amphiphiles (GSAs) for Membrane Protein Structural Study. ChemBioChem, 2022, 23, .	2.6	4
252	Applications of molecular replacement to G protein-coupled receptors. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 2287-2292.	2.5	3

#	Article	IF	Citations
253	Reply. Trends in Pharmacological Sciences, 2000, 21, 83-84.	8.7	2
254	A Microsecond Time Scale Molecular Dynamics Simulation of B2AR in a Membrane. Biophysical Journal, 2009, 96, 340a.	0.5	2
255	Q&A: Brian Kobilka. Nature, 2014, 514, S12-S13.	27.8	2
256	Structural insights into the dynamic process of Gâ€proteinâ€" coupled receptor activation. FASEB Journal, 2013, 27, 323.1.	0.5	2
257	Different Effects of GsÎ± Splice Variants on Î²2-Adrenoreceptor-mediated Signaling. Journal of Biological Chemistry, 1998, 273, 5109a-5116.	3.4	2
258	[15] Receptor chimers. Methods in Neurosciences, 1995, 25, 278-301.	0.5	1
259	Dual Modulation of Cell Survival and Cell Death by Î²2-Adrenergic Gi and Gs Signaling in Adult Mouse Cardiac Myocytes. Circulation, 2000, 102, 2672-2672.	1.6	1
260	Brian Kobilka. Circulation Research, 2013, 112, 1538-1541.	4.5	1
261	Time-resolved Conformational Analysis during GPCR-Gs Coupling. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2020, 93, 3-S28-3.	0.0	1
262	Negative Allosteric Modulation of Arrestin Recruitment to the Î² 2 â€Adrenergic Receptor. FASEB Journal, 2019, 33, 503.15.	0.5	1
263	Linkage mapping of ?-2 adrenergic receptor genes to mouse Chromosomes 2 and 5. Mammalian Genome, 1993, 4, 650-655.	2.2	0
264	Inside Cover: A New Class of Amphiphiles Bearing Rigid Hydrophobic Groups for Solubilization and Stabilization of Membrane Proteins (Chem. Eur. J. 31/2012). Chemistry - A European Journal, 2012, 18, 9434-9434.	3.3	0
265	DISRUPTION OF THE Î²2 ADRENERGIC RECEPTOR PDZ BINDING MOTIF: IMPACT UPON CARDIAC STRUCTURE AND FUNCTION.. Critical Care Medicine, 2005, 33, A15.	0.9	0
266	Structure and Dynamics of the Human beta 2 Adrenoceptor. FASEB Journal, 2008, 22, 539.1.	0.5	0
267	Evolutionarily conserved trafficking signal within the alpha2c adrenergic receptor restricts plasma membrane expression. FASEB Journal, 2008, 22, 727.1.	0.5	0
268	Crystal structure of active Betaâ€arrestin1 bound to phosphorylated carboxyâ€terminus of a G proteinâ€coupled receptor. FASEB Journal, 2013, 27, lb549.	0.5	0
269	Cardiovascular Î²-Adrenergic Receptor Subtype Physiology Studied by Targeted Gene Disruption â€¢ 95. Pediatric Research, 1997, 41, 18-18.	2.3	0
270	Structural insights into the subtype-selective antagonist binding to the M2 muscarinic receptor. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2020, 93, 3-P-359.	0.0	0