Barbara Baird

List of Publications by Year
in descending order

108 papers	6,240 citations	50244 46 h-index	71651 76 g-index
110 all docs	110 docs citations	110 times ranked	4908 citing authors

#	Article	IF	Citations
1	Critical Fluctuations in Plasma Membrane Vesicles. ACS Chemical Biology, 2008, 3, 287-293.	1.6	420
2	Critical Role for Cholesterol in Lyn-mediated Tyrosine Phosphorylation of FcÎµRI and Their Association with Detergent-resistant Membranes. Journal of Cell Biology, 1999, 145, 877-887.	2.3	306
3	Compartmentalized Activation of the High Affinity Immunoglobulin E Receptor within Membrane Domains. Journal of Biological Chemistry, 1997, 272, 4276-4280.	1.6	302
4	Quantitative Analysis of Phospholipids in Functionally Important Membrane Domains from RBL-2H3 Mast Cells Using Tandem High-Resolution Mass Spectrometryâ€. Biochemistry, 1999, 38, 8056-8063.	1.2	274
5	Structural determinants for partitioning of lipids and proteins between coexisting fluid phases in giant plasma membrane vesicles. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 20-32.	1.4	200
6	A Lipid Raft Environment Enhances Lyn Kinase Activity by Protecting the Active Site Tyrosine from Dephosphorylation. Journal of Biological Chemistry, 2003, 278, 20746-20752.	1.6	151
7	Fluorescence Anisotropy Measurements of Lipid Order in Plasma Membranes and Lipid Rafts from RBL-2H3 Mast Cellsâ€. Biochemistry, 2001, 40, 12422-12429.	1.2	142
8	Molecular Clustering of STIM1 with Orai1/CRACM1 at the Plasma Membrane Depends Dynamically on Depletion of Ca²⁺ Stores and on Electrostatic Interactions. Molecular Biology of the Cell, 2009, 20, 389-399.	0.9	139
9	Oligo(ethylene glycol) Containing Polymer Brushes as Bioselective Surfaces. Langmuir, 2005, 21, 2495-2504.	1.6	132
10	Lipid rafts, fluid/fluid phase separation, and their relevance to plasma membrane structure and function. Seminars in Cell and Developmental Biology, 2007, 18, 583-590.	2.3	132
11	Visualization of plasma membrane compartmentalization with patterned lipid bilayers. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 13798-13803.	3.3	131
12	Lipid segregation and IgE receptor signaling: A decade of progress. Biochimica Et Biophysica Acta - Molecular Cell Research, 2005, 1746, 252-259.	1.9	129
13	Membrane organization in immunoglobulin E receptor signaling. Current Opinion in Chemical Biology, 1999, 3, 95-99.	2.8	128
14	Coexisting Domains in the Plasma Membranes of Live Cells Characterized by Spin-Label ESR Spectroscopy. Biophysical Journal, 2006, 90, 4452-4465.	0.2	128
15	Electron Spin Resonance Characterization of Liquid Ordered Phase of Detergent-Resistant Membranes from RBL-2H3 Cells. Biophysical Journal, 1999, 77, 925-933.	0.2	118
16	Cross-Correlation Analysis of Inner-Leaflet-Anchored Green Fluorescent Protein Co-Redistributed with IgE Receptors and Outer Leaflet Lipid Raft Components. Biophysical Journal, 2001, 80, 2120-2132.	0.2	117
17	Structural studies on the membrane-bound immunoglobulin E-receptor complex. 1. Characterization of large plasma membrane vesicles from rat basophilic leukemia cells and insertion of amphipathic fluorescent probes. Biochemistry, 1983, 22, 3466-3474.	1.2	110
18	Structural Aspects of the Association of FcÎµRI with Detergent-resistant Membranes. Journal of Biological Chemistry, 1999, 274, 1753-1758.	1.6	96

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19	FcÏµRI as a paradigm for a lipid raft-dependent receptor in hematopoietic cells. Seminars in Immunology, 2001, 13, 99-105.	2.7	93
20	Nanobiotechnology and Cell Biology: Micro- and Nanofabricated Surfaces to Investigate Receptor-Mediated Signaling. Annual Review of Biophysics, 2008, 37, 265-288.	4.5	86
21	Ordered and Disordered Phases Coexist in Plasma Membrane Vesicles of RBL-2H3 Mast Cells. An ESR Study. Biophysical Journal, 2003, 85, 1278-1288.	0.2	83
22	Trivalent Ligands with Rigid DNA Spacers Reveal Structural Requirements For IgE Receptor Signaling in RBL Mast Cells. ACS Chemical Biology, 2007, 2, 674-684.	1.6	83
23	Insights into immunoglobulin E receptor signaling from structurally defined ligands. Immunological Reviews, 2007, 217, 269-279.	2.8	82
24	Stimulated association of STIM1 and Orai1 is regulated by the balance of PtdIns(4,5)<i>P</i>2 between distinct membrane pools. Journal of Cell Science, 2011, 124, 2602-2610.	1.2	82
25	Conformations of IgE bound to its receptor Fc.epsilon.RI and in solution. Biochemistry, 1991, 30, 9125-9132.	1.2	81
26	How does the plasma membrane participate in cellular signaling by receptors for immunoglobulin E?. Biophysical Chemistry, 1999, 82, 109-119.	1.5	76
27	A Basic Sequence in STIM1 Promotes Ca²⁺ Influx by Interacting with the C-Terminal Acidic Coiled Coil of Orai1. Biochemistry, 2010, 49, 1067-1071.	1.2	76
28	Fluorescence Resonance Energy Transfer between Lipid Probes Detects Nanoscopic Heterogeneity in the Plasma Membrane of Live Cells. Biophysical Journal, 2007, 92, 3564-3574.	0.2	75
29	In situ measurement of degranulation as a biosensor based on RBL-2H3 mast cells. Biosensors and Bioelectronics, 2004, 20, 791-796.	5.3	71
30	Bivalent Ligands with Rigid Double-Stranded DNA Spacers Reveal Structural Constraints on Signaling by FcÎµRI. Journal of Immunology, 2002, 169, 856-864.	0.4	68
31	Structural studies on the membrane-bound immunoglobulin E (IgE)-receptor complex. 2. Mapping of distances between sites on IgE and the membrane surface. Biochemistry, 1983, 22, 3475-3484.	1.2	67
32	Aggregation of IgE-receptor complexes on rat basophilic leukemia cells does not change the intrinsic affinity but can alter the kinetics of the ligand-IgE interaction. Biochemistry, 1992, 31, 5350-5356.	1.2	63
33	High Spatial Resolution Observation of Single-Molecule Dynamics in Living Cell Membranes. Biophysical Journal, 2005, 88, L43-L45.	0.2	63
34	Heterogeneous Glycosylation of Immunoglobulin E Constructs Characterized by Top-Down High-Resolution 2-D Mass Spectrometryâ€. Biochemistry, 2000, 39, 3369-3376.	1.2	62
35	Dynamic conformations compared for IgE and IgG1 in solution and bound to receptors. Biochemistry, 1992, 31, 7446-7456.	1.2	61
36	Distinct Stages of Stimulated FcÎµRI Receptor Clustering and Immobilization Are Identified through Superresolution Imaging. Biophysical Journal, 2013, 105, 2343-2354.	0.2	61

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37	Cross-Linking of IgE-Receptor complexes at the cell surface: A fluorescence method for studying the binding of monovalent and bivalent haptens to IgE. Molecular Immunology, 1986, 23, 769-781.	1.0	60
38	Disruption of lipid order by short-chain ceramides correlates with inhibition of phospholipase D and downstream signaling by FcÎµRI. Journal of Cell Science, 2003, 116, 3177-3187.	1.2	59
39	Reconstitution of Regulated Phosphorylation of FcÏµRI by a Lipid Raft-excluded Protein-tyrosine Phosphatase. Journal of Biological Chemistry, 2005, 280, 1230-1235.	1.6	59
40	Highly Effective Poly(Ethylene Glycol) Architectures for Specific Inhibition of Immune Receptor Activationâ€. Biochemistry, 2003, 42, 12739-12748.	1.2	55
41	Transmembrane Sequences Are Determinants of Immunoreceptor Signaling. Journal of Immunology, 2005, 175, 2123-2131.	0.4	53
42	Characterization of new rat anti-mouse IgE monoclonals and their use along with chimeric IgE to further define the site that interacts with FcÎµRII and FcÎµRI. Molecular Immunology, 1991, 28, 1149-1154.	1.0	50
43	Fluorescence Resonance Energy Transfer Reveals Interleukin (IL)-1-dependent Aggregation of IL-1 Type I Receptors That Correlates with Receptor Activation. Journal of Biological Chemistry, 1995, 270, 27562-27568.	1.6	50
44	Cross-Linking of IgE-receptor complexes at the cell surface: Synthesis and characterization of a long bivalent hapten that is capable of triggering mast cells and rat basophilic leukemia cells. Molecular Immunology, 1986, 23, 783-790.	1.0	49
45	Functionalized Surface Arrays for Spatial Targeting of Immune Cell Signaling. Journal of the American Chemical Society, 2006, 128, 5594-5595.	6.6	49
46	Evidence Supporting a Role for Microfilaments in Regulating the Coupling between Poorly Dissociable IgEâˆ'FcÎµRI Aggregates and Downstream Signaling Pathways. Biochemistry, 1997, 36, 7447-7456.	1.2	48
47	Antigen-Decorated Shell Cross-Linked Nanoparticles:Â Synthesis, Characterization, and Antibody Interactions. Bioconjugate Chemistry, 2005, 16, 1246-1256.	1.8	46
48	Ca2+ Waves Initiate Antigen-Stimulated Ca2+ Responses in Mast Cells. Journal of Immunology, 2009, 183, 6478-6488.	0.4	43
49	Roles for Ca2+ Mobilization and Its Regulation in Mast Cell Functions. Frontiers in Immunology, 2012, 3, 104.	2.2	43
50	Structural mapping of membrane-bound immunoglobulin E-receptor complexes: use of monoclonal anti-IgE antibodies to probe the conformation of receptor-bound IgE. Biochemistry, 1985, 24, 6260-6267.	1.2	41
51	Spatiotemporal Resolution of Mast Cell Granule Exocytosis. Journal of Cell Science, 2012, 125, 2986-94.	1.2	41
52	Mutant RBL Mast Cells Defective in FcÎµRI Signaling and Lipid Raft Biosynthesis Are Reconstituted by Activated Rho-family GTPases. Molecular Biology of the Cell, 2000, 11, 3661-3673.	0.9	40
53	The Î²- and Î³-isoforms of type I PIP5K regulate distinct stages of Ca2+ signaling in mast cells. Journal of Cell Science, 2009, 122, 2567-2574.	1.2	40
54	Structural mapping of Fc receptor bound immunoglobulin E: proximity to the membrane surface of the antibody combining site and another site in the Fab segments. Biochemistry, 1985, 24, 6252-6259.	1.2	39

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55	Lateral Diffusion of Membrane Lipid-Anchored Probes before and after Aggregation of Cell Surface IgE-Receptorsâ€. Journal of Physical Chemistry A, 2003, 107, 8310-8318.	1.1	35
56	Sequestration of phosphoinositides by mutated MARCKS effector domain inhibits stimulated Ca²⁺mobilization and degranulation in mast cells. Molecular Biology of the Cell, 2011, 22, 4908-4917.	0.9	33
57	Microfilaments regulate the rate of exocytosis in rat basophilic leukemia cells. Biochemical and Biophysical Research Communications, 1990, 171, 222-229.	1.0	31
58	Bivalent ligand dissociation kinetics from receptor-bound immunoglobulin E: evidence for a time-dependent increase in ligand rebinding at the cell surface. Biochemistry, 1991, 30, 2357-2363.	1.2	31
59	Differential targeting of secretory lysosomes and recycling endosomes in mast cells revealed by patterned antigen arrays. Journal of Cell Science, 2007, 120, 3147-3154.	1.2	30
60	A nanosecond fluorescence depolarization study on the segmental flexibility of receptor-bound immunoglobulin E. Biochemistry, 1990, 29, 4607-4612.	1.2	29
61	Antigenâ€Stimulated Trafficking from the Recycling Compartment to the Plasma Membrane in RBL Mast Cells. Traffic, 2003, 4, 190-200.	1.3	28
62	Rab11 Regulates the Mast Cell Exocytic Response. Traffic, 2016, 17, 1027-1041.	1.3	28
63	The FcÎµRI signaling cascade and integrin trafficking converge at patterned ligand surfaces. Molecular Biology of the Cell, 2017, 28, 3383-3396.	0.9	28
64	Roles for lipid heterogeneity in immunoreceptor signaling. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 830-836.	1.2	27
65	Roles for Ca2+ mobilization and its regulation in mast cell functions: recent progress. Biochemical Society Transactions, 2016, 44, 505-509.	1.6	27
66	Interaction of IgE with Its High-Affinity Receptor. International Archives of Allergy and Immunology, 1989, 88, 23-28.	0.9	26
67	Dissociation kinetics of bivalent ligand-immunoglobulin E aggregates in solution. Biochemistry, 1991, 30, 2348-2356.	1.2	26
68	The Fc Segment of IgE Influences the Kinetics of Dissociation of a Symmetrical Bivalent Ligand from Cyclic Dimeric Complexesâ€. Biochemistry, 1996, 35, 5518-5527.	1.2	26
69	Alteration of Lipid Composition Modulates Fc.epsilon.RI Signaling in RBL-2H3 Cells. Biochemistry, 1995, 34, 4376-4384.	1.2	25
70	Rotational motion of monomeric and dimeric immunoglobulin E-receptor complexes. Biochemistry, 1992, 31, 567-575.	1.2	23
71	Regulation of exocytosis and mitochondrial relocalization by Alpha-synuclein in a mammalian cell model. Npj Parkinson's Disease, 2019, 5, 12.	2.5	23
72	Altered Patterns of Tyrosine Phosphorylation and Syk Activation for Sterically Restricted Cyclic Dimers of IgE-FcÎµRIâ€. Biochemistry, 1997, 36, 2237-2242.	1.2	22

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73	Molecular mechanisms of spontaneous and directed mast cell motility. Journal of Leukocyte Biology, 2012, 92, 1029-1041.	1.5	22
74	Structural mapping of IgE-Fc.epsilon.RI, an immunoreceptor complex. Accounts of Chemical Research, 1993, 26, 428-434.	7.6	21
75	A microtiter plate assay using cellulose acetate filters for measuring cellular [3H]serotonin release. Journal of Immunological Methods, 1983, 64, 365-375.	0.6	20
76	Segmental flexibility of receptor-bound immunoglobulin E. Biochemistry, 1985, 24, 7810-7820.	1.2	20
77	Inhibitors of PI(4,5)P₂Synthesis Reveal Dynamic Regulation of IgE Receptor Signaling by Phosphoinositides in RBL Mast Cells. Molecular Pharmacology, 2013, 83, 793-804.	1.0	20
78	Spatially Defined EGF Receptor Activation Reveals an F-Actin-Dependent Phospho-Erk Signaling Complex. Biophysical Journal, 2014, 107, 2639-2651.	0.2	20
79	Polyunsaturated fatty acids inhibit stimulated coupling between the ER Ca2+ sensor STIM1 and the Ca2+ channel protein Orai1 in a process that correlates with inhibition of stimulated STIM1 oligomerization. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2014, 1841, 1210-1216.	1.2	18
80	Molecular Templates for Bio-specific Recognition by Low-Energy Electron Beam Lithography. Nanobiotechnology, 2005, 1, 023-034.	1.2	16
81	Molecular anatomy of the early events in STIM1 activation; oligomerization or conformational change?. Journal of Cell Science, 2017, 130, 2821-2832.	1.2	16
82	Dinitrophenyl ligand substrates and their application to immunosensors. Biosensors and Bioelectronics, 2006, 22, 63-70.	5.3	15
83	Real-Time Cross-Correlation Image Analysis of Early Events in IgE Receptor Signaling. Biophysical Journal, 2008, 94, 4996-5008.	0.2	15
84	Nanodomains in early and later phases of FcÉ›RI signalling. Essays in Biochemistry, 2015, 57, 147-163.	2.1	15
85	Roles for SH2 and SH3 domains in Lyn kinase association with activated FcÎµRI in RBL mast cells revealed by patterned surface analysis. Journal of Structural Biology, 2009, 168, 161-167.	1.3	13
86	Computation of a Theoretical Membrane Phase Diagram and the Role of Phase in Lipid-Raft-Mediated Protein Organization. Journal of Physical Chemistry B, 2018, 122, 3500-3513.	1.2	13
87	Binding Mechanisms of PEGylated Ligands Reveal Multiple Effects of the PEG Scaffold. Biochemistry, 2008, 47, 1017-1030.	1.2	12
88	2D-ELDOR Study of Heterogeneity and Domain Structure Changes in Plasma Membrane Vesicles upon Cross-Linking of Receptors. Journal of Physical Chemistry B, 2011, 115, 10462-10469.	1.2	12
89	Mechanisms of epidermal growth factor receptor signaling as characterized by patterned ligand activation and mutational analysis. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1430-1435.	1.4	12
90	Activation of Cdc42 is necessary for sustained oscillations of Ca2+ and PIP2 stimulated by antigen in RBL mast cells. Biology Open, 2014, 3, 700-710.	0.6	11

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91	Toxoplasma gondii inhibits mast cell degranulation by suppressing phospholipase CÎ³-mediated Ca2+ mobilization. Frontiers in Microbiology, 2013, 4, 179.	1.5	11
92	Structure and Function of the High-Affinity Receptor for Immunoglobulin E. , 1990, , 173-197.		10
93	Recent evidence for common signalling mechanisms among immunoreceptors that recognize foreign antigens. Cellular Signalling, 1992, 4, 339-349.	1.7	9
94	Mutations in the Polybasic Juxtamembrane Sequence of Both Plasma Membrane- and Endoplasmic Reticulum-localized Epidermal Growth Factor Receptors Confer Ligand-independent Cell Transformation. Journal of Biological Chemistry, 2013, 288, 34930-34942.	1.6	9
95	Short chain ceramides disrupt immunoreceptor signaling by inhibiting segregation of Lo from Ld plasma membrane components. Biology Open, 2018, 7, .	0.6	8
96	STIM1 activation is regulated by a 14 amino acid sequence adjacent to the CRAC activation domain. AIMS Biophysics, 2016, 3, 99-118.	0.3	8
97	Characterization of Model Antigens Composed of Biotinylated Haptens Bound to Avidin. Immunological Investigations, 1990, 19, 1-25.	1.0	6
98	Synthesis and Characterization of Î±,Ï‰â€bi[2,4â€dinitrophenyl (DNP)] poly(2â€methoxystyrene) Functional Polymers. Initial Evaluation of the Interaction of the Functional Polymers with RBL Mast Cells. Journal of Macromolecular Science - Pure and Applied Chemistry, 2008, 45, 664-671.	1.2	6
99	Enhancement of the recognition by cytotoxic T lymphocytes (CTL) of target membrane antigens after fusion with whole cells. Cellular Immunology, 1983, 75, 312-327.	1.4	5
100	Sphingosine derivatives inhibit cell signaling by electrostatically neutralizing polyphosphoinositides at the plasma membrane. Self/nonself, 2010, 1, 133-143.	2.0	5
101	A novel fluorescence-based biosynthetic trafficking method provides pharmacologic evidence that PI4-kinase IIIÎ± is important for protein trafficking from the endoplasmic reticulum to the plasma membrane. BMC Cell Biology, 2015, 16, 5.	3.0	5
102	FcÎµRI and the T cell receptor for antigen activate similar signalling pathways in T cell-RBL cell hybrids. Cellular Signalling, 1993, 5, 155-167.	1.7	4
103	Fabrication of electroactive composite nanofibers of functionalized polymer and CNT capable of specifically binding with the IgE (Immunoglobulin E) antibody. Surface and Interface Analysis, 2014, 46, 237-242.	0.8	4
104	Effects of Subunit Mutation on the Rotational Dynamics of Fc.epsilon.RI, the High Affinity Receptor for IgE, in Transfected Cells. Biochemistry, 1995, 34, 6093-6099.	1.2	3
105	Archetypical Conductive Polymer Structure for Specific Interaction with Proteins. Journal of Macromolecular Science - Pure and Applied Chemistry, 2012, 49, 330-338.	1.2	3
106	Proteolytic Digestion of the Î² and Î³ Subunits of the Receptor for Immunoglobulin E at the Cytoplasmic Face of the Plasma Membrane. Journal of Receptors and Signal Transduction, 1989, 9, 235-258.	1.2	1
107	Analysis of Ligand Binding and Cross-Linking of Receptors in Solution and on Cell Surfaces. , 1991, , 169-195.		0
108	FcÎµRI Signaling in Specialized Membrane Domains. , 1999, , 102-114.		0