Carsten Berndt

List of Publications by Year
in descending order

67 papers	8,523 citations	94433 37 h-index	114465 63 g-index
71 all docs	71 docs citations	71 times ranked	11982 citing authors

#	Article	IF	Citations
1	Oxidative Stress. Annual Review of Biochemistry, 2017, 86, 715-748.	11.1	2,180
2	Selenium Utilization by GPX4 Is Required to Prevent Hydroperoxide-Induced Ferroptosis. Cell, 2018, 172, 409-422.e21.	28.9	920
3	Thioredoxins, Glutaredoxins, and Peroxiredoxinsâ€"Molecular Mechanisms and Health Significance: from Cofactors to Antioxidants to Redox Signaling. Antioxidants and Redox Signaling, 2013, 19, 1539-1605.	5.4	557
4	Glutaredoxin systems. Biochimica Et Biophysica Acta - General Subjects, 2008, 1780, 1304-1317.	2.4	523
5	Thiol redox control via thioredoxin and glutaredoxin systems. Biochemical Society Transactions, 2005, 33, 1375.	3.4	341
6	Thiol-based mechanisms of the thioredoxin and glutaredoxin systems: implications for diseases in the cardiovascular system. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H1227-H1236.	3.2	307
7	Identification and Successful Negotiation of a Metabolic Checkpoint in Direct Neuronal Reprogramming. Cell Stem Cell, 2016, 18, 396-409.	11.1	307
8	Characterization of human glutaredoxin 2 as iron-sulfur protein: A possible role as redox sensor. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 8168-8173.	7.1	260
9	European contribution to the study of ROS: A summary of the findings and prospects for the future from the COST action BM1203 (EU-ROS). Redox Biology, 2017, 13, 94-162.	9.0	242
10	Thioredoxins and glutaredoxins as facilitators of protein folding. Biochimica Et Biophysica Acta - Molecular Cell Research, 2008, 1783, 641-650.	4.1	223
11	Cytosolic thiol switches regulating basic cellular functions: GAPDH as an information hub?. Biological Chemistry, 2015, 396, 523-537.	2.5	137
12	A Novel Monothiol Glutaredoxin (Grx4) from Escherichia coli Can Serve as a Substrate for Thioredoxin Reductase. Journal of Biological Chemistry, 2005, 280, 24544-24552.	3.4	129
13	Glutaredoxins in Thiol/Disulfide Exchange. Antioxidants and Redox Signaling, 2013, 18, 1654-1665.	5.4	117
14	Fin56-induced ferroptosis is supported by autophagy-mediated GPX4 degradation and functions synergistically with mTOR inhibition to kill bladder cancer cells. Cell Death and Disease, 2021, 12, 1028.	6.3	107
15	How Does Ironâ€"Sulfur Cluster Coordination Regulate the Activity of Human Glutaredoxin 2?. Antioxidants and Redox Signaling, 2007, 9, 151-157.	5.4	101
16	Crucial function of vertebrate glutaredoxin 3 (PICOT) in iron homeostasis and hemoglobin maturation. Molecular Biology of the Cell, 2013, 24, 1895-1903.	2.1	101
17	Glutathione, Glutaredoxins, and Iron. Antioxidants and Redox Signaling, 2017, 27, 1235-1251.	5.4	95
18	Oxidation and S-Nitrosylation of Cysteines in Human Cytosolic and Mitochondrial Glutaredoxins. Journal of Biological Chemistry, 2007, 282, 14428-14436.	3.4	94

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19	Metabolism of selenium compounds catalyzed by the mammalian selenoprotein thioredoxin reductase. Biochimica Et Biophysica Acta - General Subjects, 2009, 1790, 1513-1519.	2.4	92
20	Characterization of the human monothiol glutaredoxin 3 (PICOT) as ironâ€“sulfur protein. Biochemical and Biophysical Research Communications, 2010, 394, 372-376.	2.1	89
21	Expression Pattern of Human Glutaredoxin 2 Isoforms: Identification and Characterization of Two Testis/Cancer Cell-Specific Isoforms. Antioxidants and Redox Signaling, 2008, 10, 547-558.	5.4	85
22	The mitochondrial monothiol glutaredoxin S15 is essential for iron-sulfur protein maturation in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13735-13740.	7.1	84
23	A dimer of the FeS cluster biosynthesis protein IscA from cyanobacteria binds a [2Fe2S] cluster between two protomers and transfers it to [2Fe2S] and [4Fe4S] apo proteins. FEBS Journal, 2003, 270, 1662-1671.	0.2	81
24	The Dithiol Glutaredoxins of African Trypanosomes Have Distinct Roles and Are Closely Linked to the Unique Trypanothione Metabolism. Journal of Biological Chemistry, 2010, 285, 35224-35237.	3.4	78
25	Arabidopsis Glutaredoxin S17 and Its Partner, the Nuclear Factor Y Subunit C11/Negative Cofactor 2Î±, Contribute to Maintenance of the Shoot Apical Meristem under Long-Day Photoperiod. Plant Physiology, 2015, 167, 1643-1658.	4.8	78
26	Glutaredoxin regulates vascular development by reversible glutathionylation of sirtuin 1. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20057-20062.	7.1	77
27	Vertebrate-specific glutaredoxin is essential for brain development. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20532-20537.	7.1	71
28	Redox regulation by glutathione needs enzymes. Frontiers in Pharmacology, 2014, 5, 168.	3.5	71
29	Characterization and Reconstitution of a 4Fe-4S Adenylyl Sulfate/Phosphoadenylyl Sulfate Reductase from Bacillus subtilis. Journal of Biological Chemistry, 2004, 279, 7850-7855.	3.4	63
30	Monothiol Glutaredoxin-1 Is an Essential Iron-Sulfur Protein in the Mitochondrion of African Trypanosomes. Journal of Biological Chemistry, 2008, 283, 27785-27798.	3.4	60
31	A Conservedcis-Proline Precludes Metal Binding by the Active Site Thiolates in Members of the Thioredoxin Family of Proteinsâ€. Biochemistry, 2007, 46, 6903-6910.	2.5	57
32	The Multidomain Thioredoxin-Monothiol Glutaredoxins Represent a Distinct Functional Group. Antioxidants and Redox Signaling, 2011, 15, 19-30.	5.4	54
33	The specificity of thioredoxins and glutaredoxins is determined by electrostatic and geometric complementarity. Chemical Science, 2015, 6, 7049-7058.	7.4	52
34	Molecular and Catalytic Properties of Arabidopsis thaliana Adenylyl Sulfate (APS)-Kinase. Archives of Biochemistry and Biophysics, 2001, 392, 303-310.	3.0	51
35	Molecular basis for the distinct functions of redox-active and FeS-transfering glutaredoxins. Nature Communications, 2020, 11, 3445.	12.8	47
36	The metalloprotease ADAMTS4 generates N-truncated AÎ²4â€“x species and marks oligodendrocytes as a source of amyloidogenic peptides in Alzheimerâ€™s disease. Acta Neuropathologica, 2019, 137, 239-257.	7.7	44

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37	Zebrafish heart development is regulated via glutaredoxin 2 dependent migration and survival of neural crest cells. Redox Biology, 2014, 2, 673-678.	9.0	43
38	Chelation of lysosomal iron protects against ionizing radiation. Biochemical Journal, 2010, 432, 295-301.	3.7	41
39	Hypoxic Signaling and the Cellular Redox Tumor Environment Determine Sensitivity to MTH1 Inhibition. Cancer Research, 2016, 76, 2366-2375.	0.9	40
40	Ironâ€“Sulfur Cluster Binding by Mitochondrial Monothiol Glutaredoxin-1 of<i>Trypanosoma brucei</i>: Molecular Basis of Ironâ€“Sulfur Cluster Coordination and Relevance for Parasite Infectivity. Antioxidants and Redox Signaling, 2013, 19, 665-682.	5.4	37
41	Redox-regulated fate of neural stem progenitor cells. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 1543-1554.	2.4	37
42	Early alpha-lipoic acid therapy protects from degeneration of the inner retinal layers and vision loss in an experimental autoimmune encephalomyelitis-optic neuritis model. Journal of Neuroinflammation, 2018, 15, 71.	7.2	37
43	Characterization of the Redox Properties of Poplar Glutaredoxin. Antioxidants and Redox Signaling, 2003, 5, 15-22.	5.4	33
44	Ironâ€sulfur glutaredoxin 2 protects oligodendrocytes against damage induced by nitric oxide release from activated microglia. Glia, 2017, 65, 1521-1534.	4.9	33
45	Redox regulation of cytoskeletal dynamics during differentiation and de-differentiation. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 1575-1587.	2.4	30
46	Protective effects of 4-aminopyridine in experimental optic neuritis and multiple sclerosis. Brain, 2020, 143, 1127-1142.	7.6	29
47	Mechanism of inhibition of ribonucleotide reductase with motexafin gadolinium (MGd). Biochemical and Biophysical Research Communications, 2009, 379, 775-779.	2.1	22
48	Redox Modifications of Proteins of the Mitochondrial Fusion and Fission Machinery. Cells, 2020, 9, 815.	4.1	22
49	Regulation of sirtuin expression in autoimmune neuroinflammation: Induction of SIRT1 in oligodendrocyte progenitor cells. Neuroscience Letters, 2019, 704, 116-125.	2.1	21
50	Glutaredoxins with iron-sulphur clusters in eukaryotes - Structure, function and impact on disease. Biochimica Et Biophysica Acta - Bioenergetics, 2021, 1862, 148317.	1.0	16
51	Cellular functions of glutathione. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 3137-3138.	2.4	15
52	An unusual mode of ironâ€“sulfur-cluster coordination in a teleost glutaredoxin. Biochemical and Biophysical Research Communications, 2013, 436, 491-496.	2.1	15
53	Activation of Wnt signaling promotes hippocampal neurogenesis in experimental autoimmune encephalomyelitis. Molecular Neurodegeneration, 2016, 11, 53.	10.8	13
54	Glutaredoxin 2 Reduces Asthma-Like Acute Airway Inflammation in Mice. Frontiers in Immunology, 2020, 11, 561724.	4.8	12

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55	Ascorbate and endocytosed Motexafin gadolinium induce lysosomal rupture. Cancer Letters, 2011, 307, 119-123.	7.2	7
56	Redox Events As Modulators of Pathology and Therapy of Neuroinflammatory Diseases. Frontiers in Cell and Developmental Biology, 2016, 4, 63.	3.7	6
57	Glutaredoxin 2 promotes SP-1-dependent CSPG4 transcription and migration of wound healing NG2 glia and glioma cells: Enzymatic Taoism. Redox Biology, 2022, 49, 102221.	9.0	6
58	Thioredoxins and Glutaredoxins. Functions and Metal Ion Interactions. Metal Ions in Life Sciences, 2009, , 413-439.	1.0	4
59	Preface to the special issue on redox control of cell function. Biochimica Et Biophysica Acta - General Subjects, 2008, 1780, 1169.	2.4	3
60	Protein oxidative damage in the hippocampus in a mouse model of acute hyperammonemia. European Journal of Medical Research, 2014, 19, .	2.2	3
61	Redox regulation of differentiation and de-differentiation. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 1467-1468.	2.4	2
62	Redox-regulated brain development. , 2020, , 565-582.		2
63	Oxidative Folding of Proteins<i>in vivo</i>. RSC Biomolecular Sciences, 2008, , 1-18.	0.4	0
64	14 Thioredoxins and Glutaredoxins. Functions and Metal Ion Interactions. , 2015, , 413-440.		0
65	Thioredoxin (TXN). , 2016, , 1-9.		0
66	Thioredoxin (TXN). , 2018, , 5377-5385.		0
67	Functional plasticity in the thioredoxin family: FeS-thio- and glutaredoxins. , 2022, , 219-239.		0