Qing Cheng

List of Publications by Year
in descending order

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35 papers	1,521 citations	394421 19 h-index	361022 35 g-index
38 all docs	38 docs citations	38 times ranked	1945 citing authors

#	Article	IF	Citations
1	A novel persulfide detection method reveals protein persulfide- and polysulfide-reducing functions of thioredoxin and glutathione systems. Science Advances, 2016, 2, e1500968.	10.3	250
2	Crystal Structure and Catalysis of the Selenoprotein Thioredoxin Reductase 1. Journal of Biological Chemistry, 2009, 284, 3998-4008.	3.4	168
3	Irreversible inhibition of cytosolic thioredoxin reductase 1 as a mechanistic basis for anticancer therapy. Science Translational Medicine, 2018, 10, .	12.4	147
4	Control of protein function through oxidation and reduction of persulfidated states. Science Advances, 2020, 6, eaax8358.	10.3	121
5	Substrate and inhibitor specificities differ between human cytosolic and mitochondrial thioredoxin reductases: Implications for development of specific inhibitors. Free Radical Biology and Medicine, 2011, 50, 689-699.	2.9	93
6	Selenocysteine Insertion at a Predefined UAG Codon in a Release Factor 1 (RF1)-depleted Escherichia coli Host Strain Bypasses Species Barriers in Recombinant Selenoprotein Translation. Journal of Biological Chemistry, 2017, 292, 5476-5487.	3.4	60
7	The Selenium-independent Inherent Pro-oxidant NADPH Oxidase Activity of Mammalian Thioredoxin Reductase and Its Selenium-dependent Direct Peroxidase Activities. Journal of Biological Chemistry, 2010, 285, 21708-21723.	3.4	57
8	Bicarbonate is essential for protein-tyrosine phosphatase 1B (PTP1B) oxidation and cellular signaling through EGF-triggered phosphorylation cascades. Journal of Biological Chemistry, 2019, 294, 12330-12338.	3.4	51
9	System-wide identification and prioritization of enzyme substrates by thermal analysis. Nature Communications, 2021, 12, 1296.	12.8	44
10	Direct Observation of Methylmercury and Auranofin Binding to Selenocysteine in Thioredoxin Reductase. Inorganic Chemistry, 2020, 59, 2711-2718.	4.0	43
11	Details in the catalytic mechanism of mammalian thioredoxin reductase 1 revealed using point mutations and juglone-coupled enzyme activities. Free Radical Biology and Medicine, 2016, 94, 110-120.	2.9	42
12	The conserved Trp114 residue of thioredoxin reductase 1 has a redox sensor-like function triggering oligomerization and crosslinking upon oxidative stress related to cell death. Cell Death and Disease, 2015, 6, e1616-e1616.	6.3	36
13	Thioredoxin reductase 1 and NADPH directly protect protein tyrosine phosphatase 1B from inactivation during H2O2 exposure. Journal of Biological Chemistry, 2017, 292, 14371-14380.	3.4	36
14	Tagging recombinant proteins with a Sel-tag for purification, labeling with electrophilic compounds or radiolabeling with 11C. Nature Protocols, 2006, 1, 604-613.	12.0	35
15	Inhibition of thioredoxin reductase 1 by porphyrins and other small molecules identified by a high-throughput screening assay. Free Radical Biology and Medicine, 2011, 50, 1114-1123.	2.9	34
16	Homozygous mutation in TXNRD1 is associated with genetic generalized epilepsy. Free Radical Biology and Medicine, 2017, 106, 270-277.	2.9	31
17	Fragment-Based Discovery of a Regulatory Site in Thioredoxin Glutathione Reductase Acting as â€œDoorstopâ€•for NADPH Entry. ACS Chemical Biology, 2018, 13, 2190-2202.	3.4	25
18	Characterization of Lead Compounds Targeting the Selenoprotein Thioredoxin Glutathione Reductase for Treatment of Schistosomiasis. ACS Infectious Diseases, 2020, 6, 393-405.	3.8	24

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19	Indolin-2-one compounds targeting thioredoxin reductase as potential anticancer drug leads. Oncotarget, 2016, 7, 40233-40251.	1.8	23
20	Selective cellular probes for mammalian thioredoxin reductase TrxR1: Rational design of RX1, a modular 1,2-thiaselenane redox probe. CheM, 2022, 8, 1493-1517.	11.7	20
21	Selenolthiol and Dithiol C-Terminal Tetrapeptide Motifs for One-Step Purification and Labeling of Recombinant Proteins Produced in E. coli. ChemBioChem, 2006, 7, 1976-1981.	2.6	18
22	Comprehensive chemical proteomics analyses reveal that the new TRi-1 and TRi-2 compounds are more specific thioredoxin reductase 1 inhibitors than auranofin. Redox Biology, 2021, 48, 102184.	9.0	18
23	Serum thioredoxin reductase is highly increased in mice with hepatocellular carcinoma and its activity is restrained by several mechanisms. Free Radical Biology and Medicine, 2016, 99, 426-435.	2.9	17
24	Inhibition and crosslinking of the selenoprotein thioredoxin reductase-1 by p-benzoquinone. Redox Biology, 2020, 28, 101335.	9.0	17
25	Efficient selenocysteine-dependent reduction of toxoflavin by mammalian thioredoxin reductase. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 2511-2517.	2.4	15
26	Production and purification of homogenous recombinant human selenoproteins reveals a unique codon skipping event in E. coli and GPX4-specific affinity to bromosulfophthalein. Redox Biology, 2021, 46, 102070.	9.0	15
27	Preclinical PET imaging of EGFR levels: pairing a targeting with a non-targeting Sel-tagged Affibody-based tracer to estimate the specific uptake. EJNMMI Research, 2016, 6, 58.	2.5	13
28	Overexpression of Recombinant Selenoproteins in E. coli. Methods in Molecular Biology, 2018, 1661, 231-240.	0.9	13
29	Combining [11C]-AnxA5 PET Imaging with Serum Biomarkers for Improved Detection in Live Mice of Modest Cell Death in Human Solid Tumor Xenografts. PLoS ONE, 2012, 7, e42151.	2.5	11
30	Identification and targeting of selective vulnerability rendered by tamoxifen resistance. Breast Cancer Research, 2020, 22, 80.	5.0	11
31	Site-specifically 11C-labeled Sel-tagged annexin A5 and a size-matched control for dynamic in vivo PET imaging of protein distribution in tissues prior to and after induced cell death. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 2562-2573.	2.4	8
32	Redox regulation of PTPN22 affects the severity of T-cell-dependent autoimmune inflammation. ELife, 2022, 11, .	6.0	7
33	Biochemical and structural characterizations of thioredoxin reductase selenoproteins of the parasitic filarial nematodes Brugia malayi and Onchocerca volvulus. Redox Biology, 2022, 51, 102278.	9.0	6
34	Qualitative Differences in Protection of PTP1B Activity by the Reductive Trx1 or TRP14 Enzyme Systems upon Oxidative Challenges with Polysulfides or H2O2 Together with Bicarbonate. Antioxidants, 2021, 10, 111.	5.1	5
35	Expressing recombinant selenoproteins using redefinition of a single UAG codon in an RF1-depleted E. coli host strain. Methods in Enzymology, 2022, 662, 95-118.	1.0	4