Thomas Dierks

List of Publications by Year
in descending order

101	4,805	81900 39	106344 65
papers	citations	h-index	g-index

106	106	106	3590
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multiple Sulfatase Deficiency Is Caused by Mutations in the Gene Encoding the Human CÎ±-Formylglycine Generating Enzyme. Cell, 2003, 113, 435-444.	28.9	364
2	Molecular Basis for Multiple Sulfatase Deficiency and Mechanism for Formylglycine Generation of the Human Formylglycine-Generating Enzyme. Cell, 2005, 121, 541-552.	28.9	188
3	1.3 Ã... Structure of Arylsulfatase from Pseudomonas aeruginosa Establishes the Catalytic Mechanism of Sulfate Ester Cleavage in the Sulfatase Family. Structure, 2001, 9, 483-491.	3.3	177
4	The heparanomeâ€"The enigma of encoding and decoding heparan sulfate sulfation. Journal of Biotechnology, 2007, 129, 290-307.	3.8	165
5	Sulf Loss Influences N-, 2-O-, and 6-O-Sulfation of Multiple Heparan Sulfate Proteoglycans and Modulates Fibroblast Growth Factor Signaling. Journal of Biological Chemistry, 2008, 283, 27724-27735.	3.4	129
6	The mitochondrial aspartate/glutamate and ADP/ATP carrier switch from obligate counterexchange to unidirectional transport after modification by SH-reagents. Biochimica Et Biophysica Acta - Biomembranes, 1990, 1028, 268-280.	2.6	125
7	Heparan sulfate 6-O-endosulfatases: discrete in vivo activities and functional co-operativity. Biochemical Journal, 2006, 400, 63-73.	3.7	117
8	Mutations in a polycistronic nuclear gene associated with molybdenum cofactor deficiency. Nature Genetics, 1998, 20, 51-53.	21.4	115
9	Posttranslational Formation of Formylglycine in Prokaryotic Sulfatases by Modification of Either Cysteine or Serine. Journal of Biological Chemistry, 1998, 273, 25560-25564.	3.4	113
10	A novel protein modification generating an aldehyde group in sulfatases: its role in catalysis and disease. BioEssays, 1998, 20, 505-510.	2.5	104
11	Crystal Structure of an Enzyme-Substrate Complex Provides Insight into the Interaction between Human Arylsulfatase A and its Substrates During Catalysis. Journal of Molecular Biology, 2001, 305, 269-277.	4.2	101
12	Pore-like and carrier-like properties of the mitochondrial aspartate/glutamate carrier after modification by SH-reagents: evidence for a preformed channel as a structural requirement of carrier-mediated transport. Biochimica Et Biophysica Acta - Biomembranes, 1990, 1028, 281-288.	2.6	100
13	A general binding mechanism for all human sulfatases by the formylglycine-generating enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 81-86.	7.1	99
14	Arylsulfatase from Klebsiella pneumoniae Carries a Formylglycine Generated from a Serine. Journal of Biological Chemistry, 1998, 273, 4835-4837.	3.4	88
15	Sulfatases, Trapping of the Sulfated Enzyme Intermediate by Substituting the Active Site Formylglycine. Journal of Biological Chemistry, 1998, 273, 6096-6103.	3.4	88
16	Crystal Structure of the Alkylsulfatase AtsK:Â Insights into the Catalytic Mechanism of the Fe(II) Î±-Ketoglutarate-Dependent Dioxygenase Superfamilyâ€,â€¡. Biochemistry, 2004, 43, 3075-3088.	2.5	88
17	Molecular basis of multiple sulfatase deficiency, mucolipidosis II/III and Niemannâ€“Pick C1 disease â€" Lysosomal storage disorders caused by defects of non-lysosomal proteins. Biochimica Et Biophysica Acta - Molecular Cell Research, 2009, 1793, 710-725.	4.1	86
18	Amino Acid Residues Forming the Active Site of Arylsulfatase A. Journal of Biological Chemistry, 1999, 274, 12284-12288.	3.4	83

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19	Redundant function of the heparan sulfate 6â€Oâ€endosulfatases Sulf1 and Sulf2 during skeletal development. Developmental Dynamics, 2008, 237, 339-353.	1.8	82
20	The Iron Sulfur Protein AtsB Is Required for Posttranslational Formation of Formylglycine in the Klebsiella Sulfatase. Journal of Biological Chemistry, 1999, 274, 15375-15381.	3.4	75
21	Molecular Characterization of the Human CÎ±-formylglycine-generating Enzyme. Journal of Biological Chemistry, 2005, 280, 14900-14910.	3.4	74
22	Molecular analysis ofSUMF1 mutations: stability and residual activity of mutant formylglycine-generating enzyme determine disease severity in multiple sulfatase deficiency. Human Mutation, 2008, 29, 205-205.	2.5	74
23	Characterization of the Human Sulfatase Sulf1 and Its High Affinity Heparin/Heparan Sulfate Interaction Domain. Journal of Biological Chemistry, 2009, 284, 28033-28044.	3.4	70
24	The human SUMF1 gene, required for posttranslational sulfatase modification, defines a new gene family which is conserved from pro- to eukaryotes. Gene, 2003, 316, 47-56.	2.2	66
25	Differential involvement of the extracellular 6â€Oâ€endosulfatases Sulf1 and Sulf2 in brain development and neuronal and behavioural plasticity. Journal of Cellular and Molecular Medicine, 2009, 13, 4505-4521.	3.6	66
26	Natureâ€™s Polyoxometalate Chemistry: X-ray Structure of the Mo Storage Protein Loaded with Discrete Polynuclear Moâ€“O Clusters. Journal of the American Chemical Society, 2012, 134, 9768-9774.	13.7	66
27	Reaction mechanism of the reconstituted aspartate/glutamate carrier from bovine heart mitochondria. Biochimica Et Biophysica Acta - Biomembranes, 1988, 943, 231-244.	2.6	65
28	Residues Critical for Formylglycine Formation and/or Catalytic Activity of Arylsulfatase Aâ€. Biochemistry, 1998, 37, 13941-13946.	2.5	63
29	SUMF1 mutations affecting stability and activity of formylglycine generating enzyme predict clinical outcome in multiple sulfatase deficiency. European Journal of Human Genetics, 2011, 19, 253-261.	2.8	63
30	Arylsulfatase G inactivation causes loss of heparan sulfate 3- O -sulfatase activity and mucopolysaccharidosis in mice. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10310-10315.	7.1	61
31	Reaction mechanism of the reconstituted oxoglutarate carrier from bovine heart mitochondria. FEBS Journal, 1991, 198, 339-347.	0.2	59
32	Post-translational Formylglycine Modification of Bacterial Sulfatases by the Radical S-Adenosylmethionine Protein AtsB. Journal of Biological Chemistry, 2004, 279, 14570-14578.	3.4	56
33	HSulf sulfatases catalyze processive and oriented 6â€Oâ€desulfation of heparan sulfate that differentially regulates fibroblast growth factor activity. FASEB Journal, 2013, 27, 2431-2439.	0.5	56
34	A homozygous founder missense variant in arylsulfatase G abolishes its enzymatic activity causing atypical Usher syndrome in humans. Genetics in Medicine, 2018, 20, 1004-1012.	2.4	48
35	Posttranslational Modification of Serine to Formylglycine in Bacterial Sulfatases. Journal of Biological Chemistry, 2003, 278, 2212-2218.	3.4	46
36	Sulf1 and Sulf2 Differentially Modulate Heparan Sulfate Proteoglycan Sulfation during Postnatal Cerebellum Development: Evidence for Neuroprotective and Neurite Outgrowth Promoting Functions. PLoS ONE, 2015, 10, e0139853.	2.5	45

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37	Rapid Purification and High Sensitivity Analysis of Heparan Sulfate from Cells and Tissues. Journal of Biological Chemistry, 2009, 284, 25714-25722.	3.4	44
38	Conversion of cysteine to formylglycine in eukaryotic sulfatases occurs by a common mechanism in the endoplasmic reticulum. FEBS Letters, 1998, 423, 61-65.	2.8	43
39	Sulfatase modifying factor 1 trafficking through the cells: from endoplasmic reticulum to the endoplasmic reticulum. EMBO Journal, 2007, 26, 2443-2453.	7.8	42
40	ERp44 Mediates a Thiol-independent Retention of Formylglycine-generating Enzyme in the Endoplasmic Reticulum. Journal of Biological Chemistry, 2008, 283, 6375-6383.	3.4	41
41	Arylsulfatase G, a Novel Lysosomal Sulfatase. Journal of Biological Chemistry, 2008, 283, 11388-11395.	3.4	41
42	The function of the oxylipin 12-oxophytodienoic acid in cell signaling, stress acclimation, and development. Journal of Experimental Botany, 2018, 69, 5341-5354.	4.8	41
43	Arylsulfatase B Improves Locomotor Function after Mouse Spinal Cord Injury. PLoS ONE, 2013, 8, e57415.	2.5	40
44	Asymmetric orientation of the reconstituted aspartate/glutamate carrier from mitochondria. Biochimica Et Biophysica Acta - Biomembranes, 1988, 937, 112-126.	2.6	39
45	Defective Oligomerization of Arylsulfatase A as a Cause of Its Instability in Lysosomes and Metachromatic Leukodystrophy. Journal of Biological Chemistry, 2002, 277, 9455-9461.	3.4	37
46	Roles of Heparan Sulfate Sulfation in Dentinogenesis. Journal of Biological Chemistry, 2012, 287, 12217-12229.	3.4	36
47	Arylsulfatase K, a Novel Lysosomal Sulfatase. Journal of Biological Chemistry, 2013, 288, 30019-30028.	3.4	36
48	Neonatal manifestation of multiple sulfatase deficiency. European Journal of Pediatrics, 2009, 168, 969-973.	2.7	35
49	Heparan Sulfateâ€"Editing Extracellular Sulfatases Enhance VEGF Bioavailability for Ischemic Heart Repair. Circulation Research, 2019, 125, 787-801.	4.5	35
50	Characterization of Posttranslational Formylglycine Formation by Luminal Components of the Endoplasmic Reticulum. Journal of Biological Chemistry, 2001, 276, 47021-47028.	3.4	33
51	The SULFs, Extracellular Sulfatases for Heparan Sulfate, Promote the Migration of Corneal Epithelial Cells during Wound Repair. PLoS ONE, 2013, 8, e69642.	2.5	33
52	Complex care of individuals with multiple sulfatase deficiency: Clinical cases and consensus statement. Molecular Genetics and Metabolism, 2018, 123, 337-346.	1.1	31
53	Expression, Localization, Structural, and Functional Characterization of pFGE, the Paralog of the Cî±-Formylglycine-generating Enzyme. Journal of Biological Chemistry, 2005, 280, 15173-15179.	3.4	30
54	Formylglycine-generating enzymes for site-specific bioconjugation. Biological Chemistry, 2019, 400, 289-297.	2.5	30

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55	Formylglycine Aldehyde Tagâ€"Protein Engineering through a Novel Postâ€translational Modification. ChemBioChem, 2009, 10, 425-427.	2.6	28
56	HSulf-1 deficiency dictates a metabolic reprograming of glycolysis and TCA cycle in ovarian cancer. Oncotarget, 2015, 6, 33705-33719.	1.8	28
57	Crystal Structure of Human pFGE, the Paralog of the CÎ±-formylglycine-generating Enzyme. Journal of Biological Chemistry, 2005, 280, 15180-15187.	3.4	26
58	Ataxia is the major neuropathological finding in arylsulfatase G-deficient mice: similarities and dissimilarities to Sanfilippo disease (mucopolysaccharidosis type III). Human Molecular Genetics, 2015, 24, 1856-1868.	2.9	26
59	Twoâ€fold Bioorthogonal Derivatization by Different Formylglycineâ€Generating Enzymes. Angewandte Chemie - International Edition, 2018, 57, 7245-7249.	13.8	26
60	Single-Molecule Force Spectroscopy of Cartilage Aggrecan Self-Adhesion. Biophysical Journal, 2010, 99, 3498-3504.	0.5	25
61	Eukaryotic formylglycineâ€generating enzyme catalyses aÂmonooxygenase type of reaction. FEBS Journal, 2015, 282, 3262-3274.	4.7	23
62	Catch Bond Interaction between Cell-Surface Sulfatase Sulf1 and Glycosaminoglycans. Biophysical Journal, 2015, 108, 1709-1717.	0.5	23
63	Natural history of multiple sulfatase deficiency: Retrospective phenotyping and functional variant analysis to characterize an ultraâ€rare disease. Journal of Inherited Metabolic Disease, 2020, 43, 1298-1309.	3.6	23
64	Kinetic study of the aspartate/glutamate carrier in intact rat heart mitochondria and comparison with a reconstituted system. Biochimica Et Biophysica Acta - Bioenergetics, 1991, 1058, 329-338.	1.0	22
65	Identification of formylglycine in sulfatases by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. Journal of Mass Spectrometry, 2003, 38, 80-86.	1.6	22
66	Expression, characterization, and site-specific covalent immobilization of an L-amino acid oxidase from the fungus Hebeloma cylindrosporum. Applied Microbiology and Biotechnology, 2019, 103, 2229-2241.	3.6	21
67	Molecular Characterization of Arylsulfatase G. Journal of Biological Chemistry, 2014, 289, 27992-28005.	3.4	20
68	Probing the active site of the reconstituted aspartate/glutamate carrier from bovine heart mitochondria: carbodiimide-catalyzed acylation of a functional lysine residue. Biochimica Et Biophysica Acta - Biomembranes, 1992, 1103, 13-24.	2.6	19
69	Rapid degradation of an active formylglycine generating enzyme variant leads to a late infantile severe form of multiple sulfatase deficiency. European Journal of Human Genetics, 2013, 21, 1020-1023.	2.8	19
70	Structural diversity of polyoxomolybdate clusters along the three-fold axis of the molybdenum storage protein. Journal of Inorganic Biochemistry, 2014, 138, 122-128.	3.5	19
71	Probing the active site of the reconstituted aspartate/glutamate carrier from mitochondria. Structure/function relationship involving one lysine and two cysteine residues. FEBS Journal, 1992, 210, 269-277.	0.2	17
72	Cyclosporin A Inhibits the Degradation of Signal Sequences after Processing of Presecretory Proteins by Signal Peptidase. FEBS Journal, 1996, 239, 509-518.	0.2	17

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73	Bifunctional Reagents for Formylglycine Conjugation: Pitfalls and Breakthroughs. ChemBioChem, 2020, 21, 3580-3593.	2.6	16
74	Arylsulfatase K inactivation causes mucopolysaccharidosis due to deficient glucuronate desulfation of heparan and chondroitin sulfate. Biochemical Journal, 2020, 477, 3433-3451.	3.7	16
75	The Non-catalytic N-terminal Extension of Formylglycine-generating Enzyme Is Required for Its Biological Activity and Retention in the Endoplasmic Reticulum. Journal of Biological Chemistry, 2008, 283, 11556-11564.	3.4	15
76	Loss of HSulf-1: The Missing Link between Autophagy and Lipid Droplets in Ovarian Cancer. Scientific Reports, 2017, 7, 41977.	3.3	15
77	Site-Specific Conjugation Strategy for Dual Antibodyâ€“Drug Conjugates Using Aerobic Formylglycine-Generating Enzymes. Bioconjugate Chemistry, 2021, 32, 1167-1174.	3.6	15
78	Recognition of Arylsulfatase A and B by the UDP-N-acetylglucosamine:lysosomal Enzyme N-Acetylglucosamine-phosphotransferase. Journal of Biological Chemistry, 2003, 278, 32653-32661.	3.4	14
79	Degeneration of Photoreceptor Cells in Arylsulfatase G-Deficient Mice. , 2016, 57, 1120.		14
80	Paralog of the formylglycineâ€generating enzymeâ€ƒâ€“â€ƒretention in the endoplasmic reticulum by canonical and noncanonical signals. FEBS Journal, 2008, 275, 1118-1130.	4.7	13
81	Efficient Folding of Firefly Luciferase after Transport into Mammalian Microsomes in the Absence of Luminal Chaperones and Folding Catalysts. Journal of Biological Chemistry, 1996, 271, 19509-19513.	3.4	12
82	Arylsulfatase K is the Lysosomal 2-Sulfoglucuronate Sulfatase. ACS Chemical Biology, 2017, 12, 367-373.	3.4	12
83	Recognition and ER Quality Control of Misfolded Formylglycine-Generating Enzyme by Protein Disulfide Isomerase. Cell Reports, 2018, 24, 27-37.e4.	6.4	12
84	A mouse model for fucosidosis recapitulates storage pathology and neurological features of the milder form of the human disease. DMM Disease Models and Mechanisms, 2016, 9, 1015-28.	2.4	11
85	Expanding the genetic cause of multiple sulfatase deficiency: A novel SUMF1 variant in a patient displaying a severe late infantile form of the disease. Molecular Genetics and Metabolism, 2017, 121, 252-258.	1.1	11
86	Cooperation of binding sites at the hydrophilic domain of cell-surface sulfatase Sulf1 allows for dynamic interaction of the enzyme with its substrate heparan sulfate. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 5287-5298.	2.4	10
87	Proprotein Convertases Process and Thereby Inactivate Formylglycine-generating Enzyme*. Journal of Biological Chemistry, 2013, 288, 5828-5839.	3.4	10
88	Evaluation of sulfatase-directed quinone methide traps for proteomics. Bioorganic and Medicinal Chemistry, 2012, 20, 622-627.	3.0	9
89	Conversion of Serineâ€Type Aldehyde Tags by the Radical SAM Protein AtsB from Methanosarcina mazei. ChemBioChem, 2019, 20, 2074-2078.	2.6	9
90	Components and Mechanisms Involved in Transport of Proteins into the Endoplasmic Reticulum. Sub-Cellular Biochemistry, 1993, 21, 17-40.	2.4	9

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91	Luciferase Assembly after Transport into Mammalian Microsomes Involves Molecular Chaperones and Peptidyl-Prolyl Isomerases. Journal of Biological Chemistry, 1996, 271, 23487-23494.	3.4	8
92	Severe neonatal multiple sulfatase deficiency presenting with hydrops fetalis in a preterm birth patient. JIMD Reports, 2019, 49, 48-52.	1.5	7
93	Channel Properties of Mitochondrial Carriers. , 1994, , 117-129.		6
94	Exploring the Sulfatase 1 Catch Bond Free Energy Landscape using Jarzynskiâ€™s Equality. Scientific Reports, 2018, 8, 16849.	3.3	5
95	Defects in lysosomal enzyme modification for catalytic activity. , 2004, , 131-140.		5
96	Zweifachâ€bioorthogonale Derivatisierung durch verschiedene Formylglycinâ€generierende Enzyme. Angewandte Chemie, 2018, 130, 7365-7369.	2.0	4
97	Sensorimotor and Neurocognitive Dysfunctions Parallel Early Telencephalic Neuropathology in Fucosidosis Mice. Frontiers in Behavioral Neuroscience, 2018, 12, 69.	2.0	4
98	A homozygous missense variant of SUMF1 in the Bedouin population extends the clinical spectrum in ultrarare neonatal multiple sulfatase deficiency. Molecular Genetics & Genomic Medicine, 2020, 8, e1167.	1.2	4
99	Decoding the consecutive lysosomal degradation of 3-O-sulfate containing heparan sulfate by Arylsulfatase G (ARSG). Biochemical Journal, 2021, 478, 3221-3237.	3.7	2
100	MHC Class II Deficiency. , 2009, , 1306-1308.		0
101	Genetically modified human type II collagen for N- and C-terminal covalent tagging. Canadian Journal of Chemistry, 2018, 96, 204-211.	1.1	0