Dieter BrÃ¶mme

List of Publications by Year
in descending order

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84	7,777	66343	58581
papers	citations	42 h-index	82 g-index

89	89	89	6697
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Essential Role for Cathepsin S in MHC Class IIâ€“Associated Invariant Chain Processing and Peptide Loading. Immunity, 1996, 4, 357-366.	14.3	502
2	Vinyl Sulfones as Mechanism-Based Cysteine Protease Inhibitors. Journal of Medicinal Chemistry, 1995, 38, 3193-3196.	6.4	487
3	Human and Parasitic Papain-Like Cysteine Proteases:Â Their Role in Physiology and Pathology and Recent Developments in Inhibitor Design. Chemical Reviews, 2002, 102, 4459-4488.	47.7	468
4	Human Cathepsin O2, a Matrix Protein-degrading Cysteine Protease Expressed in Osteoclasts. Journal of Biological Chemistry, 1996, 271, 2126-2132.	3.4	387
5	Substrate Profiling of Cysteine Proteases Using a Combinatorial Peptide Library Identifies Functionally Unique Specificities. Journal of Biological Chemistry, 2006, 281, 12824-12832.	3.4	370
6	Human cathepsin K cleaves native type I and II collagens at the N-terminal end of the triple helix. Biochemical Journal, 1998, 331, 727-732.	3.7	318
7	The role of cathepsins in osteoporosis and arthritis: Rationale for the design of new therapeutics. Advanced Drug Delivery Reviews, 2005, 57, 973-993.	13.7	270
8	Role for Cathepsin F in Invariant Chain Processing and Major Histocompatibility Complex Class II Peptide Loading by Macrophages. Journal of Experimental Medicine, 2000, 191, 1177-1186.	8.5	216
9	Human Cathepsin O2, a Novel Cysteine Protease Highly Expressed in Osteoclastomas and Ovary Molecular Cloning, Sequencing and Tissue Distribution. Biological Chemistry Hoppe-Seyler, 1995, 376, 379-384.	1.4	215
10	Human Cathepsin V Functional Expression, Tissue Distribution, Electrostatic Surface Potential, Enzymatic Characterization, and Chromosomal Localizationâ€¡. Biochemistry, 1999, 38, 2377-2385.	2.5	213
11	Regulation of Collagenase Activities of Human Cathepsins by Glycosaminoglycans. Journal of Biological Chemistry, 2004, 279, 5470-5479.	3.4	194
12	Cathepsin K inhibitors for osteoporosis and potential off-target effects. Expert Opinion on Investigational Drugs, 2009, 18, 585-600.	4.1	177
13	Cathepsin K Is a Critical Protease in Synovial Fibroblast-Mediated Collagen Degradation. American Journal of Pathology, 2001, 159, 2167-2177.	3.8	169
14	Comparison of cathepsins K and S expression within the rheumatoid and osteoarthritic synovium. Arthritis and Rheumatism, 2002, 46, 663-674.	6.7	168
15	Pivotal Role of Cathepsin K in Lung Fibrosis. American Journal of Pathology, 2004, 164, 2203-2216.	3.8	167
16	Cathepsin V, a Novel and Potent Elastolytic Activity Expressed in Activated Macrophages. Journal of Biological Chemistry, 2004, 279, 36761-36770.	3.4	165
17	Osteoclastic Bone Degradation and the Role of Different Cysteine Proteinases and Matrix Metalloproteinases: Differences Between Calvaria and Long Bone. Journal of Bone and Mineral Research, 2006, 21, 1399-1408.	2.8	156
18	Collagenolytic Activity of Cathepsin K Is Specifically Modulated by Cartilage-Resident Chondroitin Sulfates. Biochemistry, 2000, 39, 529-536.	2.5	155

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19	Collagenase Activity of Cathepsin K Depends on Complex Formation with Chondroitin Sulfate. Journal of Biological Chemistry, 2002, 277, 28669-28676.	3.4	153
20	Salvia miltiorrhiza: An ancient Chinese herbal medicine as a source for anti-osteoporotic drugs. Journal of Ethnopharmacology, 2014, 155, 1401-1416.	4.1	150
21	Crystal structure of human cathepsin K complexed with a potent inhibitor. Nature Structural Biology, 1997, 4, 105-109.	9.7	142
22	Monitoring compartment-specific substrate cleavage by cathepsins B, K, L, and S at physiological pH and redox conditions. BMC Biochemistry, 2009, 10, 23.	4.4	134
23	Characterization of novel cathepsin K mutations in the pro and mature polypeptide regions causing pycnodysostosis. Journal of Clinical Investigation, 1999, 103, 731-738.	8.2	132
24	Structural basis of collagen fiber degradation by cathepsin K. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17474-17479.	7.1	110
25	Aging-associated modifications of collagen affect its degradation by matrix metalloproteinases. Matrix Biology, 2018, 65, 30-44.	3.6	109
26	Cathepsin V is involved in the degradation of invariant chain in human thymus and is overexpressed in myasthenia gravis. Journal of Clinical Investigation, 2003, 112, 517-526.	8.2	105
27	Production and activation of recombinant papain-like cysteine proteases. Methods, 2004, 32, 199-206.	3.8	104
28	Expression of human cathepsin K in Pichia pastoris and preliminary crystallographic studies of an inhibitor complex. Protein Science, 1997, 6, 919-921.	7.6	99
29	The Crystal and Molecular Structures of a Cathepsin K:Chondroitin Sulfate Complex. Journal of Molecular Biology, 2008, 383, 78-91.	4.2	95
30	Thiol-Dependent Cathepsins: Pathophysiological Implications and Recent Advances in Inhibitor Design. Current Pharmaceutical Design, 2002, 8, 1639-1658.	1.9	87
31	Changes in Structural-Mechanical Properties and Degradability of Collagen during Aging-associated Modifications. Journal of Biological Chemistry, 2015, 290, 23291-23306.	3.4	81
32	Glycosaminoglycan-Mediated Loss of Cathepsin K Collagenolytic Activity in MPS I Contributes to Osteoclast and Growth Plate Abnormalities. American Journal of Pathology, 2009, 175, 2053-2062.	3.8	80
33	Effects of Cysteine Proteases on the Structural and Mechanical Properties of Collagen Fibers. Journal of Biological Chemistry, 2013, 288, 5940-5950.	3.4	80
34	Fructus Ligustri Lucidi preserves bone quality through the regulation of gut microbiota diversity, oxidative stress, TMAO and Sirt6 levels in aging mice. Aging, 2019, 11, 9348-9368.	3.1	72
35	Antifibrotic effects of curcumin are associated with overexpression of cathepsins K and L in bleomycin treated mice and human fibroblasts. Respiratory Research, 2011, 12, 154.	3.6	65
36	Comparative substrate specificity analysis of recombinant human cathepsin V and cathepsin L. Archives of Biochemistry and Biophysics, 2004, 430, 274-283.	3.0	60

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37	The S2 subsites of cathepsins K and L and their contribution to collagen degradation. Protein Science, 2007, 16, 662-670.	7.6	58
38	Role of cathepsin K in structural changes in brachiocephalic artery during progression of atherosclerosis in apoE-deficient mice. Atherosclerosis, 2008, 200, 58-68.	0.8	57
39	Pharmacological Inhibition of Cathepsin S Decreases Atherosclerotic Lesions in Apoe-/- Mice. Journal of Cardiovascular Pharmacology, 2010, 56, 98-105.	1.9	54
40	Cathepsin K osteoporosis trials, pycnodysostosis and mouse deficiency models: Commonalities and differences. Expert Opinion on Drug Discovery, 2016, 11, 457-472.	5.0	51
41	The human cysteine protease cathepsin V can compensate for murine cathepsin L in mouse epidermis and hair follicles. European Journal of Cell Biology, 2004, 83, 775-780.	3.6	48
42	A novel approach to inhibit bone resorption: exosite inhibitors against cathepsin K. British Journal of Pharmacology, 2016, 173, 396-410.	5.4	46
43	The effect of cathepsin K deficiency on airway development and TGF-Î²1 degradation. Respiratory Research, 2011, 12, 72.	3.6	40
44	Structural requirements for the collagenase and elastase activity of cathepsin K and its selective inhibition by an exosite inhibitor. Biochemical Journal, 2015, 465, 163-173.	3.7	40
45	Antimicrobial Peptide LL-37 Is Both a Substrate of Cathepsins S and K and a Selective Inhibitor of Cathepsin L. Biochemistry, 2015, 54, 2785-2798.	2.5	38
46	Cathepsin K: a cysteine protease with unique kinin-degrading properties. Biochemical Journal, 2004, 383, 501-506.	3.7	37
47	Cleavage of Nidogen-1 by Cathepsin S Impairs Its Binding to Basement Membrane Partners. PLoS ONE, 2012, 7, e43494.	2.5	37
48	Elastin Degradation by Cathepsin V Requires Two Exosites. Journal of Biological Chemistry, 2013, 288, 34871-34881.	3.4	37
49	An Ectosteric Inhibitor of Cathepsin K Inhibits Bone Resorption in Ovariectomized Mice. Journal of Bone and Mineral Research, 2017, 32, 2415-2430.	2.8	36
50	Structure-Activity Analysis of Cathepsin K/Chondroitin 4-Sulfate Interactions. Journal of Biological Chemistry, 2011, 286, 8988-8998.	3.4	33
51	Acridone alkaloids as potent inhibitors of cathepsin V. Bioorganic and Medicinal Chemistry, 2011, 19, 1477-1481.	3.0	31
52	Anti-inflammatory and anti-osteoporotic lignans from Vitex negundo seeds. FÃ¬toterapÃ¬Ã¢, 2014, 93, 31-38.	2.2	31
53	Regulation of cathepsin K activity by hydrogen peroxide. Biological Chemistry, 2008, 389, 1123-1126.	2.5	30
54	Papainâ€like Cysteine Proteases. Current Protocols in Protein Science, 2000, 21, Unit 21.2.	2.8	26

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55	Identification of mouse cathepsin K structural elements that regulate the potency of odanacatib. Biochemical Journal, 2017, 474, 851-864.	3.7	24
56	Role of Cysteine Cathepsins in Extracellular Proteolysis. , 2011, , 23-51.		24
57	Selective Inhibition of the Collagenase Activity of Cathepsin K. Journal of Biological Chemistry, 2007, 282, 16492-16501.	3.4	23
58	Elastolytic activity of cysteine cathepsins K, S, and V promotes vascular calcification. Scientific Reports, 2019, 9, 9682.	3.3	22
59	Development and characterization of a eukaryotic expression system for human type II procollagen. BMC Biotechnology, 2015, 15, 112.	3.3	21
60	Expression of elastolytic cathepsins in human skin and their involvement in age-dependent elastin degradation. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129544.	2.4	21
61	Antibody-induced pain-like behavior and bone erosion: links to subclinical inflammation, osteoclast activity, and acid-sensing ion channel 3â€“dependent sensitization. Pain, 2022, 163, 1542-1559.	4.2	21
62	Tanshinones that selectively block the collagenase activity of cathepsin K provide a novel class of ectosteric antiresorptive agents for bone. British Journal of Pharmacology, 2018, 175, 902-923.	5.4	20
63	Collagen type I degradation fragments act through the collagen receptor LAIR-1 to provide a negative feedback for osteoclast formation. Bone, 2018, 117, 23-30.	2.9	20
64	Peptide Methyl Ketones as Reversible Inhibitors of Cysteine Proteinases. Journal of Enzyme Inhibition and Medicinal Chemistry, 1989, 3, 13-21.	0.5	17
65	Substrate-derived triazolo- and azapeptides as inhibitors of cathepsins K and S. European Journal of Medicinal Chemistry, 2018, 144, 201-210.	5.5	17
66	N -Peptidyl-O -carbamoyl amino acid hydroxamates: Irreversible inhibitors for the study of the S2 â€² specificity of cysteine proteinases. FEBS Letters, 1993, 322, 211-214.	2.8	16
67	Cathepsin V, but not cathepsins L, B and K, may release angiostatin-like fragments from plasminogen. Biological Chemistry, 2008, 389, 195-200.	2.5	16
68	Affinity Crystallography: A New Approach to Extracting High-Affinity Enzyme Inhibitors from Natural Extracts. Journal of Natural Products, 2016, 79, 1962-1970.	3.0	16
69	Lack of cathepsin activities alter or prevent the development of lung granulomas in a mouse model of sarcoidosis. Respiratory Research, 2011, 12, 13.	3.6	15
70	The Role of Basic Amino Acid Surface Clusters on the Collagenase Activity of Cathepsin K. Biochemistry, 2013, 52, 7742-7752.	2.5	15
71	The abnormal accumulation of heparan sulfate in patients with mucopolysaccharidosis prevents the elastolytic activity of cathepsin V. Carbohydrate Polymers, 2021, 253, 117261.	10.2	13
72	Lycopene Improves Bone Quality and Regulates AGE/RAGE/NF-Ð²B Signaling Pathway in High-Fat Diet-Induced Obese Mice. Oxidative Medicine and Cellular Longevity, 2022, 2022, 1-14.	4.0	12

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73	Effect of conditioning solutions containing ferric chloride on dentin bond strength and collagen degradation. Dental Materials, 2017, 33, 1093-1102.	3.5	9
74	A composite docking approach for the identification and characterization of ectosteric inhibitors of cathepsin K. PLoS ONE, 2017, 12, e0186869.	2.5	8
75	Cysteine Cathepsins and the Skeleton. Clinical Reviews in Bone and Mineral Metabolism, 2011, 9, 83-93.	0.8	7
76	The Unusual Resistance of Avian Defensin AvBD7 to Proteolytic Enzymes Preserves Its Antibacterial Activity. PLoS ONE, 2016, 11, e0161573.	2.5	7
77	A Mild Inhibition of Cathepsin K Paradoxically Stimulates the Resorptive Activity of Osteoclasts in Culture. Calcified Tissue International, 2019, 104, 92-101.	3.1	6
78	Characterization of cathepsin S exosites that govern its elastolytic activity. Biochemical Journal, 2020, 477, 227-242.	3.7	6
79	Identification of substrate-specific inhibitors of cathepsin K through high-throughput screening. Biochemical Journal, 2019, 476, 499-512.	3.7	4
80	Green asymmetric synthesis of epoxypeptidomimetics and evaluation as human cathepsin K inhibitors. Bioorganic and Medicinal Chemistry, 2020, 28, 115597.	3.0	3
81	Leupeptazin, a highly modified tripeptide isolated from cultures of a Streptomyces sp. inhibits cathepsin K. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 1397-1400.	2.2	2
82	Action of rat liver cathepsin B on bradykinin and on the oxidized insulin A-chain. FEBS Letters, 1987, 219, 441-444.	2.8	1
83	New Synthetic Quinolines as Cathepsin K Inhibitors. Journal of the Brazilian Chemical Society, 0, , .	0.6	1
84	Cathepsin V. , 2013, , 1831-1834.		0