Thomas Binz

List of Publications by Year
in descending order

61 papers	6,412 citations	94433 37 h-index	133252 59 g-index
63 all docs	63 docs citations	63 times ranked	3286 citing authors

#	Article	IF	Citations
1	Botulinum neurotoxin A selectively cleaves the synaptic protein SNAP-25. Nature, 1993, 365, 160-163.	27.8	1,145
2	Cellubrevin is a ubiquitous tetanus-toxin substrate homologous to a putative synaptic vesicle fusion protein. Nature, 1993, 364, 346-349.	27.8	489
3	Tetanus toxin action: Inhibition of neurotransmitter release linked to synaptobrevin proteolysis. Biochemical and Biophysical Research Communications, 1992, 189, 1017-1023.	2.1	316
4	Multiple kinetic components of exocytosis distinguished by neurotoxin sensitivity. Nature Neuroscience, 1998, 1, 192-200.	14.8	313
5	The synaptic vesicle protein 2C mediates the uptake of botulinum neurotoxin A into phrenic nerves. FEBS Letters, 2006, 580, 2011-2014.	2.8	285
6	Synaptotagmins I and II Act as Nerve Cell Receptors for Botulinum Neurotoxin G. Journal of Biological Chemistry, 2004, 279, 30865-30870.	3.4	220
7	Botulinum neurotoxin B recognizes its protein receptor with high affinity and specificity. Nature, 2006, 444, 1092-1095.	27.8	219
8	The HCC-domain of botulinum neurotoxins A and B exhibits a singular ganglioside binding site displaying serotype specific carbohydrate interaction. Molecular Microbiology, 2003, 51, 631-643.	2.5	205
9	Regulation of Releasable Vesicle Pool Sizes by Protein Kinase A-Dependent Phosphorylation of SNAP-25. Neuron, 2004, 41, 417-429.	8.1	204
10	Proteolysis of SNAPâ€25 Isoforms by Botulinum Neurotoxin Types A, C, and E. Journal of Neurochemistry, 1999, 72, 327-337.	3.9	186
11	Cell entry strategy of clostridial neurotoxins. Journal of Neurochemistry, 2009, 109, 1584-1595.	3.9	175
12	Identification of the protein receptor binding site of botulinum neurotoxins B and G proves the double-receptor concept. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 359-364.	7.1	169
13	Protein Kinase C-Dependent Phosphorylation of Synaptosome-Associated Protein of 25 kDa at Ser¹⁸⁷Potentiates Vesicle Recruitment. Journal of Neuroscience, 2002, 22, 9278-9286.	3.6	167
14	The SNARE protein SNAP-25 is linked to fast calcium triggering of exocytosis. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1627-1632.	7.1	156
15	Botulinum neurotoxins C, E and F bind gangliosides via a conserved binding site prior to stimulationâ€dependent uptake with botulinum neurotoxin F utilising the three isoforms of SV2 as second receptor. Journal of Neurochemistry, 2009, 110, 1942-1954.	3.9	146
16	Two Carbohydrate Binding Sites in the HCC-domain of Tetanus Neurotoxin are Required for Toxicity. Journal of Molecular Biology, 2003, 326, 835-847.	4.2	127
17	Beyond BOTOX: advantages and limitations of individual botulinum neurotoxins. Trends in Neurosciences, 2005, 28, 446-452.	8.6	113
18	Arg362and Tyr365of the Botulinum Neurotoxin Type A Light Chain Are Involved in Transition State Stabilizationâ€. Biochemistry, 2002, 41, 1717-1723.	2.5	104

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19	Botulinum neurotoxin type D enables cytosolic delivery of enzymatically active cargo proteins to neurones via unfolded translocation intermediates. Journal of Neurochemistry, 2004, 91, 1461-1472.	3.9	95
20	Thioredoxin and Its Reductase Are Present on Synaptic Vesicles, and Their Inhibition Prevents the Paralysis Induced by Botulinum Neurotoxins. Cell Reports, 2014, 8, 1870-1878.	6.4	90
21	Probing the Mechanistic Role of Glutamate Residue in the Zinc-Binding Motif of Type A Botulinum Neurotoxin Light Chainâ€. Biochemistry, 2000, 39, 2399-2405.	2.5	84
22	The first non Clostridial botulinum-like toxin cleaves VAMP within the juxtamembrane domain. Scientific Reports, 2016, 6, 30257.	3.3	84
23	Structural Analysis of Botulinum Neurotoxin Type E Catalytic Domain and Its Mutant Glu212â†'Gln Reveals the Pivotal Role of the Glu212 Carboxylate in the Catalytic Pathwayâ€,â€¡. Biochemistry, 2004, 43, 6637-6644.	2.5	82
24	Human synaptotagminâ€II is not a high affinity receptor for botulinum neurotoxin B and G: Increased therapeutic dosage and immunogenicity. FEBS Letters, 2012, 586, 310-313.	2.8	72
25	Botulinum neurotoxin serotype D attacks neurons via two carbohydrate-binding sites in a ganglioside-dependent manner. Biochemical Journal, 2010, 431, 207-216.	3.7	71
26	Structural Analysis of Botulinum Neurotoxin Serotype F Light Chain:â€‰ Implications on Substrate Binding and Inhibitor Design. Biochemistry, 2005, 44, 11758-11765.	2.5	64
27	The biological activity of botulinum neurotoxin type C is dependent upon novel types of ganglioside binding sites. Molecular Microbiology, 2011, 81, 143-156.	2.5	64
28	Clostridial Neurotoxins: Mechanism of SNARE Cleavage and Outlook on Potential Substrate Specificity Reengineering. Toxins, 2010, 2, 665-682.	3.4	59
29	The thioredoxin reductaseâ€thioredoxin system is involved in the entry of tetanus and botulinum neurotoxins in the cytosol of nerve terminals. FEBS Letters, 2013, 587, 150-155.	2.8	55
30	Substrate Recognition Mechanism of VAMP/Synaptobrevin-cleaving Clostridial Neurotoxins. Journal of Biological Chemistry, 2008, 283, 21145-21152.	3.4	52
31	Clostridial Neurotoxin Light Chains: Devices for SNARE Cleavage Mediated Blockade of Neurotransmission. Current Topics in Microbiology and Immunology, 2012, 364, 139-157.	1.1	52
32	P2X7 Receptors Trigger ATP Exocytosis and Modify Secretory Vesicle Dynamics in Neuroblastoma Cells. Journal of Biological Chemistry, 2011, 286, 11370-11381.	3.4	48
33	SNARE tagging allows stepwise assembly of a multimodular medicinal toxin. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18197-18201.	7.1	47
34	Structural and Biochemical Studies of Botulinum Neurotoxin Serotype C1 Light Chain Protease:â€‰ Implications for Dual Substrate Specificity[,]. Biochemistry, 2007, 46, 10685-10693.	2.5	46
35	Identification of the SV2 protein receptor-binding site of botulinum neurotoxin typeÂE. Biochemical Journal, 2013, 453, 37-47.	3.7	43
36	Structural analysis of the catalytic domain of tetanus neurotoxin. Toxicon, 2005, 45, 929-939.	1.6	42

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37	Identification of the synaptic vesicle glycoprotein 2 receptor binding site in botulinum neurotoxin A. FEBS Letters, 2014, 588, 1087-1093.	2.8	40
38	Hsp90 is involved in the entry of clostridial neurotoxins into the cytosol of nerve terminals. Cellular Microbiology, 2017, 19, e12647.	2.1	39
39	Analysis of Active Site Residues of Botulinum Neurotoxin E by Mutational, Functional, and Structural Studies:â€‰ Glu335Gln Is an Apoenzyme. Biochemistry, 2005, 44, 8291-8302.	2.5	36
40	Neutralisation of specific surface carboxylates speeds up translocation of botulinum neurotoxin type B enzymatic domain. FEBS Letters, 2013, 587, 3831-3836.	2.8	33
41	Inhibition of botulinum neurotoxins interchain disulfide bond reduction prevents the peripheral neuroparalysis of botulism. Biochemical Pharmacology, 2015, 98, 522-530.	4.4	33
42	Exchange of the H_{CC} domain mediating double receptor recognition improves the pharmacodynamic properties of botulinum neurotoxin. FEBS Journal, 2011, 278, 4506-4515.	4.7	32
43	Time course and temperature dependence of the membrane translocation of tetanus and botulinum neurotoxins C and D in neurons. Biochemical and Biophysical Research Communications, 2013, 430, 38-42.	2.1	30
44	A Novel Inhibitor Prevents the Peripheral Neuroparalysis of Botulinum Neurotoxins. Scientific Reports, 2015, 5, 17513.	3.3	29
45	Identification and Characterization of Botulinum Neurotoxin A Substrate Binding Pockets and Their Re-Engineering for Human SNAP-23. Journal of Molecular Biology, 2016, 428, 372-384.	4.2	28
46	Botulinum neurotoxin C mutants reveal different effects of syntaxin or SNAP-25 proteolysis on neuromuscular transmission. PLoS Pathogens, 2017, 13, e1006567.	4.7	27
47	The thioredoxin reductase â€“ Thioredoxin redox system cleaves the interchain disulphide bond of botulinum neurotoxins on the cytosolic surface of synaptic vesicles. Toxicon, 2015, 107, 32-36.	1.6	26
48	Role of the Sec22bâ€“E-Syt complex in neurite growth and ramification. Journal of Cell Science, 2020, 133, .	2.0	26
49	Identification of the Amino Acid Residues Rendering TI-VAMP Insensitive toward Botulinum Neurotoxin B. Journal of Molecular Biology, 2006, 357, 574-582.	4.2	25
50	Botulinum neurotoxin type C protease induces apoptosis in differentiated human neuroblastoma cells. Oncotarget, 2016, 7, 33220-33228.	1.8	22
51	Botulinum Neurotoxin G Binds Synaptotagmin-II in a Mode Similar to That of Serotype B: Tyrosine 1186 and Lysine 1191 Cause Its Lower Affinity. Biochemistry, 2013, 52, 3930-3938.	2.5	21
52	A Cell Line for Detection of Botulinum Neurotoxin Type B. Frontiers in Pharmacology, 2017, 8, 796.	3.5	21
53	Botulinum proteaseâ€cleaved SNARE fragments induce cytotoxicity in neuroblastoma cells. Journal of Neurochemistry, 2014, 129, 781-791.	3.9	14
54	Structural and biochemical characterization of the protease domain of the mosaic botulinum neurotoxin type HA. Pathogens and Disease, 2018, 76, .	2.0	12

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55	Exchanging the minimal cell binding fragments of tetanus neurotoxin in botulinum neurotoxin A and B impacts their toxicity at the neuromuscular junction and central neurons. Toxicon, 2013, 75, 108-121.	1.6	8
56	Botulinum Neurotoxin F Subtypes Cleaving the VAMP-2 Q58â€“K59 Peptide Bond Exhibit Unique Catalytic Properties and Substrate Specificities. Toxins, 2018, 10, 311.	3.4	6
57	Detection of VAMP Proteolysis by Tetanus and Botulinum Neurotoxin Type B In Vivo with a Cleavage-Specific Antibody. International Journal of Molecular Sciences, 2022, 23, 4355.	4.1	6
58	Clostridial Neurotoxin Light Chains: Devices for SNARE Cleavage Mediated Blockade of Neurotransmission. Current Topics in Microbiology and Immunology, 2012, , 139-157.	1.1	5
59	Engineering an Effective Human SNAP-23 Cleaving Botulinum Neurotoxin A Variant. Toxins, 2020, 12, 804.	3.4	3
60	Duplication of clostridial binding domains for enhanced macromolecular delivery into neurons. Toxicon: X, 2020, 5, 100019.	2.9	0
61	Ability of human SNAP-23 to generate high molecular weight SDS-resistant ternary SNARE complexes is influenced by C-terminal coil content. Biochemistry and Biophysics Reports, 2021, 28, 101150.	1.3	0