Robert S Haltiwanger

List of Publications by Year
in descending order

87 papers	6,259 citations	57758 44 h-index	69250 77 g-index
89 all docs	89 docs citations	89 times ranked	4681 citing authors

#	Article	IF	Citations
1	Fringe is a glycosyltransferase that modifies Notch. Nature, 2000, 406, 369-375.	27.8	792
2	Mammalian Notch1 Is Modified with Two Unusual Forms ofO-Linked Glycosylation Found on Epidermal Growth Factor-like Modules. Journal of Biological Chemistry, 2000, 275, 9604-9611.	3.4	310
3	Biological functions of fucose in mammals. Glycobiology, 2017, 27, 601-618.	2.5	282
4	Rumi Is a CAP10 Domain Glycosyltransferase that Modifies Notch and Is Required for Notch Signaling. Cell, 2008, 132, 247-258.	28.9	272
5	Notch-Jagged complex structure implicates a catch bond in tuning ligand sensitivity. Science, 2017, 355, 1320-1324.	12.6	232
6	Modification of Epidermal Growth Factor-like Repeats withO-Fucose. Journal of Biological Chemistry, 2001, 276, 40338-40345.	3.4	220
7	Regulation of mammalian Notch signaling and embryonic development by the protein<i>O</i>-glucosyltransferase Rumi. Development (Cambridge), 2011, 138, 1925-1934.	2.5	155
8	Notch Ligands Are Substrates for ProteinO-Fucosyltransferase-1 and Fringe. Journal of Biological Chemistry, 2002, 277, 29945-29952.	3.4	151
9	Significance of glycosylation in Notch signaling. Biochemical and Biophysical Research Communications, 2014, 453, 235-242.	2.1	141
10	Deciphering the Fringe-Mediated Notch Code: Identification of Activating and Inhibiting Sites Allowing Discrimination between Ligands. Developmental Cell, 2017, 40, 193-201.	7.0	137
11	O-Fucosylation of Notch Occurs in the Endoplasmic Reticulum. Journal of Biological Chemistry, 2005, 280, 11289-11294.	3.4	133
12	Fringe benefits: Functional and structural impacts of O-glycosylation on the extracellular domain of Notch receptors. Current Opinion in Structural Biology, 2011, 21, 583-589.	5.7	129
13	Regulation of signal transduction pathways in development by glycosylation. Current Opinion in Structural Biology, 2002, 12, 593-598.	5.7	123
14	Fringe Modifies O-Fucose on Mouse Notch1 at Epidermal Growth Factor-like Repeats within the Ligand-binding Site and the Abruptex Region. Journal of Biological Chemistry, 2003, 278, 7775-7782.	3.4	123
15	Emerging structural insights into glycosyltransferase-mediated synthesis of glycans. Nature Chemical Biology, 2019, 15, 853-864.	8.0	123
16	Protein O-Fucosyltransferase 2 Adds O-Fucose to Thrombospondin Type 1 Repeats. Journal of Biological Chemistry, 2006, 281, 9393-9399.	3.4	122
17	Identification of Glycosyltransferase 8 Family Members as Xylosyltransferases Acting on O-Glucosylated Notch Epidermal Growth Factor Repeats. Journal of Biological Chemistry, 2010, 285, 1582-1586.	3.4	112
18	Two Distinct Pathways for O-Fucosylation of Epidermal Growth Factor-like or Thrombospondin Type 1 Repeats. Journal of Biological Chemistry, 2006, 281, 9385-9392.	3.4	104

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19	Protein O-fucosylation: structure and function. Current Opinion in Structural Biology, 2019, 56, 78-86.	5.7	104
20	O-Fucosylation Is Required for ADAMTS13 Secretion. Journal of Biological Chemistry, 2007, 282, 17014-17023.	3.4	100
21	Modulation of receptor signaling by glycosylation: fringe is an O-fucose-Î²1,3-N-acetylglucosaminyltransferase. Biochimica Et Biophysica Acta - General Subjects, 2002, 1573, 328-335.	2.4	94
22	Fringe-mediated extension of <i>O</i> -linked fucose in the ligand-binding region of Notch1 increases binding to mammalian Notch ligands. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7290-7295.	7.1	94
23	Lunatic Fringe, Manic Fringe, and Radical Fringe Recognize Similar Specificity Determinants in O-Fucosylated Epidermal Growth Factor-like Repeats. Journal of Biological Chemistry, 2005, 280, 42454-42463.	3.4	92
24	A Mutation in EGF Repeat-8 of Notch Discriminates Between Serrate/Jagged and Delta Family Ligands. Science, 2012, 338, 1229-1232.	12.6	92
25	O-Glucose Trisaccharide Is Present at High but Variable Stoichiometry at Multiple Sites on Mouse Notch1. Journal of Biological Chemistry, 2011, 286, 31623-31637.	3.4	86
26	Post-translational Modification of Thrombospondin Type-1 Repeats in ADAMTS-like 1/Punctin-1 by C-Mannosylation of Tryptophan. Journal of Biological Chemistry, 2009, 284, 30004-30015.	3.4	85
27	A <i> <scp>POGLUT</scp> 1 </i> mutation causes a muscular dystrophy with reduced Notch signaling and satellite cell loss. EMBO Molecular Medicine, 2016, 8, 1289-1309.	6.9	84
28	Jagged1 heterozygosity in mice results in a congenital cholangiopathy which is reversed by concomitant deletion of one copy of Poglut1 (Rumi). Hepatology, 2016, 63, 550-565.	7.3	83
29	Identification and Characterization of aÎ²1,3-Glucosyltransferase That Synthesizes the Glc-Î²1,3-Fuc Disaccharide on Thrombospondin Type 1 Repeats. Journal of Biological Chemistry, 2006, 281, 36742-36751.	3.4	82
30	O-Glycosylation modulates the stability of epidermal growth factor-like repeats and thereby regulates Notch trafficking. Journal of Biological Chemistry, 2017, 292, 15964-15973.	3.4	82
31	Molecular Cloning of a Xylosyltransferase That Transfers the Second Xylose to O-Glucosylated Epidermal Growth Factor Repeats of Notch. Journal of Biological Chemistry, 2012, 287, 2739-2748.	3.4	76
32	Peters Plus Syndrome Mutations Disrupt a Noncanonical ER Quality-Control Mechanism. Current Biology, 2015, 25, 286-295.	3.9	75
33	O-Fucosylation of Thrombospondin Type 1 Repeats in ADAMTS-like-1/Punctin-1 Regulates Secretion. Journal of Biological Chemistry, 2007, 282, 17024-17031.	3.4	74
34	O-fucosylation of thrombospondin type 1 repeats restricts epithelial to mesenchymal transition (EMT) and maintains epiblast pluripotency during mouse gastrulation. Developmental Biology, 2010, 346, 25-38.	2.0	72
35	Rumi functions as both a protein <i>O</i> -glucosyltransferase and a protein <i>O</i> -xylosyltransferase. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16600-16605.	7.1	72
36	Site-specific O-Glucosylation of the Epidermal Growth Factor-like (EGF) Repeats of Notch. Journal of Biological Chemistry, 2012, 287, 33934-33944.	3.4	68

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37	Two novel protein <i>O</i> -glucosyltransferases that modify sites distinct from POGLUT1 and affect Notch trafficking and signaling. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8395-E8402.	7.1	68
38	O-Glycosylation of EGF repeats: identification and initial characterization of a UDP-glucose: protein O-glucosyltransferase. Glycobiology, 2002, 12, 763-770.	2.5	67
39	Mapping Sites of O-Glycosylation and Fringe Elongation on Drosophila Notch. Journal of Biological Chemistry, 2016, 291, 16348-16360.	3.4	61
40	Notch-modifying xylosyltransferase structures support an SNi-like retaining mechanism. Nature Chemical Biology, 2015, 11, 847-854.	8.0	60
41	Novel roles for O-linked glycans in protein folding. Glycoconjugate Journal, 2014, 31, 417-426.	2.7	59
42	A proactive role of water molecules in acceptor recognition by protein O-fucosyltransferase 2. Nature Chemical Biology, 2016, 12, 240-246.	8.0	58
43	Unusual life cycle and impact on microfibril assembly of ADAMTS17, a secreted metalloprotease mutated in genetic eye disease. Scientific Reports, 2017, 7, 41871.	3.3	56
44	Regulation of Notch Function by O-Glycosylation. Advances in Experimental Medicine and Biology, 2018, 1066, 59-78.	1.6	47
45	Inhibition of Delta-induced Notch signaling using fucose analogs. Nature Chemical Biology, 2018, 14, 65-71.	8.0	46
46	Genetic and biochemical evidence that gastrulation defects in Pofut2 mutants result from defects in ADAMTS9 secretion. Developmental Biology, 2016, 416, 111-122.	2.0	39
47	Canonical Notch ligands and Fringes have distinct effects on NOTCH1 and NOTCH2. Journal of Biological Chemistry, 2020, 295, 14710-14722.	3.4	36
48	O-Fucosylation of Thrombospondin Type 1 Repeats. Methods in Enzymology, 2010, 480, 401-416.	1.0	34
49	Protein O-Glucosyltransferase 1 (POGLUT1) Promotes Mouse Gastrulation through Modification of the Apical Polarity Protein CRUMBS2. PLoS Genetics, 2015, 11, e1005551.	3.5	34
50	O-fucosylation of the Notch Ligand mDLL1 by POFUT1 Is Dispensable for Ligand Function. PLoS ONE, 2014, 9, e88571.	2.5	32
51	The Protein O-glucosyltransferase Rumi Modifies Eyes Shut to Promote Rhabdomere Separation in Drosophila. PLoS Genetics, 2014, 10, e1004795.	3.5	29
52	Impaired ADAMTS9 secretion: A potential mechanism for eye defects in Peters Plus Syndrome. Scientific Reports, 2016, 6, 33974.	3.3	28
53	Structural analysis of Notch-regulating Rumi reveals basis for pathogenic mutations. Nature Chemical Biology, 2016, 12, 735-740.	8.0	27
54	Glycosylation of Specific Notch EGF Repeats by O-Fut1 and Fringe Regulates Notch Signaling in Drosophila. Cell Reports, 2019, 29, 2054-2066.e6.	6.4	27

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55	6-Alkynyl fucose is a bioorthogonal analog for O-fucosylation of epidermal growth factor-like repeats and thrombospondin Type-1 repeats by protein O-fucosyltransferases 1 and 2. Glycobiology, 2013, 23, 188-198.	2.5	24
56	Variant in human POFUT1 reduces enzymatic activity and likely causes a recessive microcephaly, global developmental delay with cardiac and vascular features. Glycobiology, 2018, 28, 276-283.	2.5	24
57	ADAMTS9 and ADAMTS20 are differentially affected by loss of B3GLCT in mouse model of Peters plus syndrome. Human Molecular Genetics, 2019, 28, 4053-4066.	2.9	23
58	Diseases related to Notch glycosylation. Molecular Aspects of Medicine, 2021, 79, 100938.	6.4	22
59	Structural and Mechanistic Insights into Lunatic Fringe from a Kinetic Analysis of Enzyme Mutants. Journal of Biological Chemistry, 2009, 284, 3294-3305.	3.4	18
60	Calf thymus high mobility group proteins are nonenzymatically glycated but not significantly glycosylated. Glycobiology, 1998, 8, 191-198.	2.5	16
61	Altered Notch Signaling in Dowling-Degos Disease: Additional Mutations in POGLUT1 and Further Insights into Disease Pathogenesis. Journal of Investigative Dermatology, 2019, 139, 960-964.	0.7	15
62	O-Fucosylation of ADAMTSL2 is required for secretion and is impacted by geleophysic dysplasia-causing mutations. Journal of Biological Chemistry, 2020, 295, 15742-15753.	3.4	15
63	Analyzing the Posttranslational Modification Status of Notch Using Mass Spectrometry. Methods in Molecular Biology, 2014, 1187, 209-221.	0.9	13
64	Functional characterization of zebrafish orthologs of the human Beta 3-Glucosyltransferase B3GLCT gene mutated in Peters Plus Syndrome. PLoS ONE, 2017, 12, e0184903.	2.5	12
65	Asparagine Tautomerization in Glycosyltransferase Catalysis. The Molecular Mechanism of Protein <i>O</i>-Fucosyltransferase 1. ACS Catalysis, 2021, 11, 9926-9932.	11.2	12
66	Differential Labeling of Glycoproteins with Alkynyl Fucose Analogs. International Journal of Molecular Sciences, 2020, 21, 6007.	4.1	10
67	Modulation of the NOTCH1 Pathway by LUNATIC FRINGE Is Dominant over That of MANIC or RADICAL FRINGE. Molecules, 2021, 26, 5942.	3.8	10
68	Fringe GlcNAc-transferases differentially extend O-fucose on endogenous NOTCH1 in mouse activated T cells. Journal of Biological Chemistry, 2022, 298, 102064.	3.4	9
69	Isolation and characterization of new human carrier peptides from two important vaccine immunogens. Vaccine, 2020, 38, 2315-2325.	3.8	8
70	O-fucosylation of thrombospondin type 1 repeats is essential for ECM remodeling and signaling during bone development. Matrix Biology, 2022, 107, 77-96.	3.6	8
71	Hydrocephalus in mouse <i>B3glct</i> mutants is likely caused by defects in multiple B3GLCT substrates in ependymal cells and subcommissural organ. Glycobiology, 2021, 31, 988-1004.	2.5	7
72	Peters plus syndrome mutations affect the function and stability of human Î²1,3-glucosyltransferase. Journal of Biological Chemistry, 2021, 297, 100843.	3.4	6

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73	POGLUT2 and POGLUT3 O-glucosylate multiple EGF repeats in fibrillin-1, -2, and LTBP1 and promote secretion of fibrillin-1. Journal of Biological Chemistry, 2021, 297, 101055.	3.4	6
74	Lfng and Dll3 cooperate to modulate protein interactions in cis and coordinate oscillatory Notch pathway activation in the segmentation clock. Developmental Biology, 2022, 487, 42-56.	2.0	3
75	O-fucosylation stabilizes the TSR3 motif in thrombospondin-1 by interacting with nearby amino acids and protecting a disulfide bond. Journal of Biological Chemistry, 2022, 298, 102047.	3.4	3
76	Regulation of signal transduction by glycosylation. International Journal of Experimental Pathology, 2004, 85, A49-A50.	1.3	2
77	Identification, function, and biological relevance of POGLUT2 and POGLUT3. Biochemical Society Transactions, 2022, 50, 1003-1012.	3.4	2
78	Analyzing the Effects of O-Fucosylation on Secretion of ADAMTS Proteins Using Cell-Based Assays. Methods in Molecular Biology, 2020, 2043, 25-43.	0.9	1
79	What are the Real Functions of <i>O</i>-Glycan Modifications of Notch?. Trends in Glycoscience and Glycotechnology, 2018, 30, J103-J111.	0.1	1
80	Fringe: A Glycosyltransferase That Modulates Notch Signaling.. Trends in Glycoscience and Glycotechnology, 2001, 13, 157-165.	0.1	1
81	Regulation of Notch signaling by O â€glucosylation: Notchâ€modifying xylosyltransferaseâ€substrate complexes support an S N iâ€like retaining mechanism. FASEB Journal, 2016, 30, 624.3.	0.5	1
82	O-Fucose and Fringe-modified NOTCH1 extracellular domain fragments as decoys to release niche-lodged hematopoietic progenitor cells. Glycobiology, 2021, 31, 582-592.	2.5	1
83	Glycans, Notch Signaling and Development. , 2022, , .		1
84	O-Fucosylation of Proteins. , 2021, , 182-203.		0
85	Oâ€glucosylation of Notch1 and its influence on Notch signaling. FASEB Journal, 2006, 20, .	0.5	0
86	Siteâ€Specific Analysis of O â€Fucose and O â€Glucose Glycans on Notch. FASEB Journal, 2013, 27, 335.3.	0.5	0
87	Analyzing the Stabilizing Effects of O â€Fucose Glycans on Thrombospondin Type 1 Repeats. FASEB Journal, 2018, 32, .	0.5	0