Isabella Derler

List of Publications by Year
in descending order

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54 papers	3,302 citations	172207 29 h-index	197535 49 g-index
56 all docs	56 docs citations	56 times ranked	2260 citing authors

#	Article	IF	Citations
1	Dynamic Coupling of the Putative Coiled-coil Domain of ORAI1 with STIM1 Mediates ORAI1 Channel Activation. Journal of Biological Chemistry, 2008, 283, 8014-8022.	1.6	366
2	A Cytosolic Homomerization and a Modulatory Domain within STIM1 C Terminus Determine Coupling to ORAI1 Channels. Journal of Biological Chemistry, 2009, 284, 8421-8426.	1.6	289
3	STIM1 couples to ORAI1 via an intramolecular transition into an extended conformation. EMBO Journal, 2011, 30, 1678-1689.	3.5	204
4	TRPC3 and TRPC4 Associate to Form a Redox-sensitive Cation Channel. Journal of Biological Chemistry, 2006, 281, 13588-13595.	1.6	198
5	Novel pyrazole compounds for pharmacological discrimination between receptorâ€operated and storeâ€operated <scp><scp>Ca²⁺</scp></scp> entry pathways. British Journal of Pharmacology, 2012, 167, 1712-1722.	2.7	160
6	Molecular Determinants of the Coupling between STIM1 and Orai Channels. Journal of Biological Chemistry, 2009, 284, 21696-21706.	1.6	140
7	2-Aminoethoxydiphenyl Borate Alters Selectivity of Orai3 Channels by Increasing Their Pore Size. Journal of Biological Chemistry, 2008, 283, 20261-20267.	1.6	131
8	The action of selective CRAC channel blockers is affected by the Orai pore geometry. Cell Calcium, 2013, 53, 139-151.	1.1	121
9	A Ca2+ Release-activated Ca2+ (CRAC) Modulatory Domain (CMD) within STIM1 Mediates Fast Ca2+-dependent Inactivation of ORAI1 Channels. Journal of Biological Chemistry, 2009, 284, 24933-24938.	1.6	115
10	Molecular mechanisms of STIM/Orai communication. American Journal of Physiology - Cell Physiology, 2016, 310, C643-C662.	2.1	110
11	Dynamic but not constitutive association of calmodulin with rat TRPV6 channels enables fine tuning of Ca2+-dependent inactivation. Journal of Physiology, 2006, 577, 31-44.	1.3	106
12	The Extended Transmembrane Orai1 N-terminal (ETON) Region Combines Binding Interface and Gate for Orai1 Activation by STIM1. Journal of Biological Chemistry, 2013, 288, 29025-29034.	1.6	101
13	Mechanistic view on domains mediating STIM1â€“Orai coupling. Immunological Reviews, 2009, 231, 99-112.	2.8	97
14	The STIM/Orai coupling machinery. Channels, 2008, 2, 261-268.	1.5	92
15	Resting State Orai1 Diffuses as Homotetramer in the Plasma Membrane of Live Mammalian Cells*. Journal of Biological Chemistry, 2010, 285, 41135-41142.	1.6	92
16	Cholesterol modulates Orai1 channel function. Science Signaling, 2016, 9, ra10.	1.6	80
17	Increased Hydrophobicity at the N Terminus/Membrane Interface Impairs Gating of the Severe Combined Immunodeficiency-related ORAI1 Mutant. Journal of Biological Chemistry, 2009, 284, 15903-15915.	1.6	72
18	Plasticity in Ca ²⁺ selectivity of Orai1/Orai3 heteromeric channel. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19623-19628.	3.3	61

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19	Cooperativeness of Orai Cytosolic Domains Tunes Subtype-specific Gating. Journal of Biological Chemistry, 2011, 286, 8577-8584.	1.6	51
20	A calcium-accumulating region, CAR, in the channel Orai1 enhances Ca ²⁺ permeation and SOCE-induced gene transcription. Science Signaling, 2015, 8, ra131.	1.6	51
21	Molecular Determinants within N Terminus of Orai3 Protein That Control Channel Activation and Gating. Journal of Biological Chemistry, 2011, 286, 31565-31575.	1.6	44
22	Communication between N terminus and loop2 tunes Orai activation. Journal of Biological Chemistry, 2018, 293, 1271-1285.	1.6	44
23	A novel STIM1-Orai1 gating interface essential for CRAC channel activation. Cell Calcium, 2019, 79, 57-67.	1.1	44
24	The STIM1/Orai signaling machinery. Channels, 2013, 7, 330-343.	1.5	42
25	Recent progress on STIM1 domains controlling Orai activation. Cell Calcium, 2009, 46, 227-232.	1.1	40
26	Authentic CRAC channel activity requires STIM1 and the conserved portion of the Orai N terminus. Journal of Biological Chemistry, 2018, 293, 1259-1270.	1.6	40
27	The first ankyrin-like repeat is the minimum indispensable key structure for functional assembly of homo- and heteromeric TRPC4/TRPC5 channels. Cell Calcium, 2008, 43, 260-269.	1.1	36
28	Sequential activation of STIM1 links Ca ²⁺ with luminal domain unfolding. Science Signaling, 2019, 12, .	1.6	32
29	Structure, Regulation and Biophysics of ICRAC, STIM/Orai1. Advances in Experimental Medicine and Biology, 2012, 740, 383-410.	0.8	30
30	Blockage of Store-Operated Ca2+ Influx by Synta66 is Mediated by Direct Inhibition of the Ca2+ Selective Orai1 Pore. Cancers, 2020, 12, 2876.	1.7	30
31	CRAC inhibitors: identification and potential. Expert Opinion on Drug Discovery, 2008, 3, 787-800.	2.5	27
32	STIM1 phosphorylation at Y316 modulates its interaction with SARAF and the activation of SOCE and ICRAC. Journal of Cell Science, 2019, 132, .	1.2	25
33	Review: Structure and Activation Mechanisms of CRAC Channels. Advances in Experimental Medicine and Biology, 2020, 1131, 547-604.	0.8	25
34	Critical parameters maintaining authentic CRAC channel hallmarks. European Biophysics Journal, 2019, 48, 425-445.	1.2	23
35	Inactivation-mimicking block of the epithelial calcium channel TRPV6. Science Advances, 2020, 6, .	4.7	22
36	Luminal STIM1 Mutants that Cause Tubular Aggregate Myopathy Promote Autophagic Processes. International Journal of Molecular Sciences, 2020, 21, 4410.	1.8	20

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37	CRAC channel opening is determined by a series of Orai1Âgating checkpoints in the transmembrane and cytosolicÂregions. Journal of Biological Chemistry, 2021, 296, 100224.	1.6	20
38	Gating and permeation of Orai channels. Frontiers in Bioscience - Landmark, 2012, 17, 1304.	3.0	19
39	The STIM-Orai Pathway: The Interactions Between STIM and Orai. Advances in Experimental Medicine and Biology, 2017, 993, 59-81.	0.8	17
40	The Orai Pore Opening Mechanism. International Journal of Molecular Sciences, 2021, 22, 533.	1.8	15
41	Isoform-Specific Properties of Orai Homologues in Activation, Downstream Signaling, Physiology and Pathophysiology. International Journal of Molecular Sciences, 2021, 22, 8020.	1.8	13
42	Defects in the STIM1 SOARÎ±2 domain affect multiple steps in the CRAC channel activation cascade. Cellular and Molecular Life Sciences, 2021, 78, 6645-6667.	2.4	12
43	Rapid NMR-scale purification of 15N,13C isotope-labeled recombinant human STIM1 coiled coil fragments. Protein Expression and Purification, 2018, 146, 45-50.	0.6	10
44	Transmembrane Domain 3 (TM3) Governs Orai1 and Orai3 Pore Opening in an Isoform-Specific Manner. Frontiers in Cell and Developmental Biology, 2021, 9, 635705.	1.8	10
45	Molecular Choreography and Structure of Ca2+ Release-Activated Ca2+ (CRAC) and KCa2+ Channels and Their Relevance in Disease with Special Focus on Cancer. Membranes, 2020, 10, 425.	1.4	9
46	Orai1 Boosts SK3 Channel Activation. Cancers, 2021, 13, 6357.	1.7	6
47	Deciphering Molecular Mechanisms and Intervening in Physiological and Pathophysiological Processes of Ca2+ Signaling Mechanisms Using Optogenetic Tools. Cells, 2021, 10, 3340.	1.8	3
48	The Role of Lipids in CRAC Channel Function. Biomolecules, 2022, 12, 352.	1.8	3
49	Natural photoswitches expose STIM1 activation steps. Cell Calcium, 2020, 90, 102240.	1.1	2
50	Interference In Coiled-coil Mediated Coupling Between Stim1 And Orai Channels. Biophysical Journal, 2009, 96, 115a-116a.	0.2	0
51	Heteromeric channel assembly of Orai1 and Orai3 exhibits altered Ca2+ selectivity. Biophysical Journal, 2009, 96, 559a-560a.	0.2	0
52	Cooperativeness of Orai Cytosolic Domains Tunes Subtype-Specific Gating. Biophysical Journal, 2011, 100, 181a-182a.	0.2	0
53	Cholesterol Regulates Orai1 Function. Biophysical Journal, 2014, 106, 317a.	0.2	0
54	Proteolysis of Orai1 controls cellular Ca2+ influx.. Cell Calcium, 2022, 102, 102535.	1.1	0