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Estefanía Anguita, Antonio Villalobo

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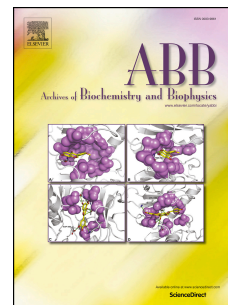
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Ca²⁺ signaling and Src-kinases-controlled cellular functions**Estefanía Anguita and Antonio Villalobo***

Department of Cancer Biology, Instituto de Investigaciones Biomédicas,
 Consejo Superior de Investigaciones Científicas and Universidad Autónoma de
 Madrid, c/ Arturo Duperier 4, E-28029 Madrid, Spain

*Correspondence: E-mail antonio.villalobo@iib.uam.es

Key words: Ca²⁺ channels; cell signaling; phosphatases; receptors; Src-family kinases.

Abbreviations: A23187; 5-(methylamino)-2-((2*R*,3*R*,6*S*,8*S*,9*R*,11*R*)-3,9,11-trimethyl-8-[(1*S*)-1-methyl-2-oxo-2-(1*H*-pyrrol-2-yl)ethyl]-1,7-dioxaspiro[5.5]undec-2-yl)methyl)-1,3-benzoxazole-4-carboxylic acid; AMPK, AMP-activated kinase; Apaf-1, apoptotic protease activating factor 1; ASV, avian sarcoma virus; ATF, activating transcription factor; Atg, autophagy-related protein; BAPTA-AM, 1,2-bis(2-aminophenoxy)ethane-*N,N,N',N'*-tetraacetic acid tetrakis(acetoxymethyl ester); BCR, B-cell antigen receptor; BDNF, brain-derived neurotrophic factor; BMP-2, bone morphogenic protein-2; [Ca²⁺]_{cyt}, cytosolic free Ca²⁺ concentration; cADPR, cyclic-ADP-ribose; CaM, calmodulin; CaMK-II, calmodulin-dependent protein kinase-II; CaSR, Ca²⁺-sensing receptor; CD, cluster of differentiation; Cdc42, cell division cycle protein 42; cl-CD95, cleaved-CD95; CREB, cAMP response element-binding protein; Crk, CT-10 regulated kinase; c-Src, cellular sarcoma kinase; DGC, dystrophin glycoprotein complex; DISC, death-inducing signaling complex; c-Yes, Yamaguchi sarcoma virus oncogene homologue; DMBA, 1,4-dimethyl-2,3-benzophenanthrene; EBV, Epstein-Barr virus; EGF, epidermal growth factor; EGFR, EGF receptor; ER, endoplasmic reticulum; ERK1/2, extracellular-regulated kinases 1 and 2; FADD, FAS-associated death domain proteins; FAK, focal-adhesion kinase; FGFR, fibroblast growth factor receptor; GAB2, Grb2-associated binding protein 2; GAP, GTPase-activating protein; GPCR, G protein-coupled receptor; Grb2, growth factor receptor bound protein 2; Grb7, growth factor receptor bound protein 7; HIF-1 α , hypoxia-inducible factor-1 α ; HUVEC, human umbilical vein endothelial cell; ICAM-1, intercellular adhesion molecule-1; I κ B, inhibitor of NF κ B; IKK, I κ B kinase; IL-8, interleukin 8; IP₃, inositol-1,4,5-trisphosphate; IP₃K, inositol 1,4,5-trisphosphate 3-kinase; IP₃R, IP₃ receptor; LAMP-2A, lysosome-associated membrane protein type 2A; LMP2A, Epstein-Barr virus latent membrane protein 2; LRP, low-density lipoprotein receptor-related protein; MAPK, mitogen-activated protein kinase; MEGF10, multiple EGF-like domains 10; MIF, macrophage migration inhibitory factor; MLCK, myosin light-chain kinase; mTOR, mammalian target of rapamycin; NAADP, nicotinic acid adenine dinucleotide phosphate; NCAM, neural cell adhesion molecule; NFAT, nuclear factor of activated T cells; NF κ B, nuclear factor κ B; NMDA, *N*-methyl-D-aspartate; NRK, normal rat kidney; OPG, osteoprotegerin; p38MAPK, 38 kDa mitogen-activated protein kinase; PAR-1, protease-activated receptor-1; PI₃K, phosphatidylinositol 3-kinase; PIP₃, phosphatidylinositol (3,4,5)-trisphosphate; PKA, protein kinase A; PKC, protein kinase C; PLA₂, phospholipase A₂; PLC γ/ζ , phospholipase C γ/ζ ; PLD1b, phospholipase D1b; PMCA, plasma membrane Ca²⁺-ATPase; PP1, 1-(1,1-dimethylethyl)-3-(4-methylphenyl)-1*H*-pyrazolo[3,4-*d*]pyrimidin-4-amine; PP2, 4-amino-5-(4-chlorophenyl)-7-(dimethylethyl)pyrazolo[3,4-*d*]pyrimidine; Pyk2, proline-rich kinase 2; RANK, receptor activator of NF κ B; RANKL, receptor activator of NF κ B ligand; RSV, Rous sarcoma virus; RyR, ryanodine receptor; SERCA, sarco(endo)plasmic reticulum Ca²⁺-ATPase; SFK, Src-family kinase; SH2, Src homology domain 2; SH3, Src homology domain 3; siRNA, small interfering RNA; SLAT, SWAP-70-like adaptor of T cells; SOCE, store-operated calcium entry; STIM, stromal interaction molecule; Syk, spleen tyrosine kinase; TNF, tumor necrosis factor; TBK1, TANK-binding kinase 1; TRAF, tumor necrosis factor receptor-associated factor; TRPC1/6 transient receptor potential canonical channels 1 and 6; TRPM7, transient receptor potential melastatin channel 7; TRPV4, transient receptor potential vanilloid channel 4; Xyk, *Xenopus* tyrosine kinase.

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