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Author: Laura J. Smithson Corina Anastasaki Ran Chen
Joseph A. Toonen Sidney B. Williams David H. Gutmann

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Review Article

Contextual signaling in cancer

Laura J. Smithson, Corina Anastasaki, Ran Chen,

Joseph A. Toonen, Sidney B. Williams, and David H. Gutmann

Department of Neurology, Washington University School of Medicine, St. Louis MO 63110

Address correspondence to: David H. Gutmann, MD, PhD; Department of Neurology, Washington University School of Medicine, Box 8111, 660 S. Euclid Avenue, St. Louis MO 63110; 314-362-7379 (Phone); 314-362-2388 (Fax); gutmannd@wustl.edu (Email)

Abbreviations: AKT, protein kinase B; ATF4, activating transcription factor 4; cAMP, cyclic adenosine monophosphate; CCL5, (C-C motif) ligand 5; CNS, central nervous system; 4EBP1, 4E (eIF4E) binding protein; ECM, extracellular matrix; ERK, p44/p42 extracellular signal-related kinase; GAP, GTPase-activating protein; GRK2, G protein-coupled receptor kinase 2; HGG, high grade glioma; HVR, hypervariable region; iPSCs, induced pluripotent stem cells; JNK, c-Jun N-terminal kinases; MEK, mitogen-activated protein kinase kinase; MKK4, mitogen-activated protein kinase kinase 4; MLK3, mixed-lineage protein kinase 3; mSIN1, mammalian stress-activated MAP kinase interacting protein-1; mTOR, mechanistic target of rapamycin; mTORC1, mTOR complex 1; mTORC2, mTOR complex 2; NF1, Neurofibromatosis type 1; NLGN3, neuroligin-3; NSCs, neural stem cells; OPG, optic pathway glioma; PDPK1/PDK1, phosphoinositide dependent protein kinase-1; PI3K, phosphoinositide 3-kinase; PIP_2, phosphatidylinositol (4,5)-biphosphate; PIP_3, phosphatidylinositol (3,4,5)-triphosphate; PKCα, β, γ, protein kinase Cα,β, γ; PKCζ, protein kinase C-zeta; PNS, peripheral nervous system;