

Major Resources Table

Animals (in vivo studies)

| Species | Vendor | Background Strain | Sex | Catalog # |
|----------------|--------------------|-------------------|-----------------|----------------|
| Wildtype mouse | Jackson Laboratory | C57BL/6J | Male and female | Stock # 000664 |

Genetically Modified Animals

| Species | Vendor or Source | Background Strain | Catalog # |
|---------------------------|--------------------|-------------------|----------------|
| PDE10A KO Parent - Male | Jackson Laboratory | C57BL/6J | Stock # 008210 |
| PDE10A KO Parent - Female | Jackson Laboratory | C57BL/6J | Stock # 008210 |

Antibodies

| Target antigen | Vendor | Catalog # | Working concentration | URL |
|--|--------------------------|----------------|-----------------------|---|
| PDE10A | Novus Biological | NB300-645 | 1:1000 for WB | https://www.novusbio.com/products/pde10a-antibody_nb300-645 |
| p-H2AX | Cell Signaling | 9718T | 1:200 for IF | https://www.cellsignal.com/products/primary-antibodies/phospho-histone-h2a-x-ser139-20e3-rabbit-mab/9718 |
| Ki67 | Abcam | Ab16667 | 1:200 for IF | https://www.abcam.com/ki67-antibody-sp6-ab16667.html |
| Donkey anti-rabbit IgG secondary antibody, DyLight 594 | Thermo Fisher Scientific | SA5-10040 | 1:500 for IF | https://www.thermofisher.com/antibody/product/Donkey-anti-Rabbit-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/SA5-10040 |
| Goat anti-rabbit IgG secondary antibody, Alexa Fluor 488 | Thermo Fisher Scientific | A-11034 | 1:500 for IF | https://www.thermofisher.com/antibody/product/Goat-anti-Rabbit-IgG-H-L-Highly-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-11034 |
| Mouse anti-cAMP antibody, monoclonal | Abcam | ab24851 | 1:200 for PLA | N/A |
| Rabbit anti-PKA RIIa ab polyclonal primary antibody | Novus Biological | NBP303477100UL | 1:200 for PLA | https://www.fishersci.com/shop/products/protein-kinase-a-regulatory-subunit-ii-alpha-rabbit-anti-human-mouse-rat-polyclonal-novus-biologicals-2/NB093043 |
| Rabbit anti-cGMP polyclonal primary antibody | Millipore Sigma | 09-101 | 1:200 for PLA | https://www.emdmillipore.com/US/en/product/Anti-cGMP-cyclic-GMP-Antibody,MM_NF-09-101 |
| Mouse anti-PKGI α/β monoclonal primary antibody | Santa Cruz | sc-271765 | 1:200 for PLA | https://www.scbt.com/p/cgkialpha-beta-antibody-e-1 |

DNA/cDNA Clones

| Clone Name | Sequence | Vendor | URL |
|----------------------------|-----------------------|---------------|---|
| pLV-EGFP-mPrkg1-shRNA#1 | CCTTGCTTTGCTCTGATTATA | VectorBuilder | https://en.vectorbuilder.com/vector/VB200603-1284hzd.html |
| pLV-mCherry-mPrkg1-shRNA#2 | TGCATTCCAAAGGAATCATTT | VectorBuilder | https://en.vectorbuilder.com/vector/VB200603-1285vkd.html |
| pLV-EGFP-mPrkar1a-shRNA | TCCTTAGTAAAGTGTCTATTT | VectorBuilder | https://en.vectorbuilder.com/vector/VB220519-1209dkp.html |
| pLV-EGFP-mPrkar2a-shRNA | GCCGACAGCTTCTATATCATA | VectorBuilder | https://en.vectorbuilder.com/vector/VB220519-1210fjw.html |

Primers

| Name of Target | Forward Primer (5' to 3') | Reverse Primer (5' to 3') |
|--------------------------|----------------------------|----------------------------|
| PDE10A (mPDE10A2) | ACTGGAAGCATGCAGTCAC | ACACCGTCTGGGAGAAGT |
| GAPDH (mGapdh) | TCAAGAAGGTGGTGAAGCAG | TGGGAGTTGCTGTTGAAGTC |
| MAFbx (mMafbx) | GCCAGAGCTGGGTGAAGAC | CTTACTGTATACCTCCTTGTTGCAGT |
| Forkhead box O3 (mFoxo3) | CAAGAGCTCTTGGTGGATCATCAACC | AGGCTGGCAGAGCTGCTGTA |
| PKGI (mPrkg1) | GTACGTCATGGAAGATGGGAAG | CTGTCCGGGTACAGTTGTAAG |
| TOP2 β (mTop2b) | GATGCTGGTGGCAAACATTC | GTCCCTACCAATCACACCTAATC |
| NDUFS1 (mNdufs1) | TAGTTGGTACAAATCCACGTT | ATCCTTTAAGACCTCGCAGA |
| SDHA (mSdha) | CGCCTAAACATGCAGAAGTCG | CCAAACCATTCCCCTGTCTG |

DOI [to be added]

| | | |
|-------------------|-------------------------|-------------------------|
| ATP5B (mAtp5b) | ATGGAGCTAATCAACAATGTGCG | CATCTGTCCATATACCAACGCTA |
| PGC1a (mPpargc1a) | ACAAGACTATTGAGCGAAC | GTACAACCTCAGATTGCTCGG |
| PGC1b (mPpargc1b) | TTCAGATGGAACCCCAAGC | TCTGGCCTCTTTTACTTCTCG |
| TFAM (mTfam) | CAGTCTTGCTGTATTCCGAAG | GGCTGCAATTTTCTAACCAA |

Cultured Cells

| Name | Vendor or Source | Sex (F, M, or unknown) | URL |
|----------------------------------|---------------------------------|------------------------|-----|
| Adult ventricular cardiomyocytes | Mouse primary cells | Male and Female | N/A |
| A2780 | Human ovarian cancer cell line | unknown | N/A |
| HCT116 | Human colon cancer cell line | unknown | N/A |
| C4-2 | Human prostate cancer cell line | unknown | N/A |
| PC-3 | Human prostate cancer cell line | unknown | N/A |
| OCC1 | Human ovarian cancer cell line | unknown | N/A |

Reagents and Kits

| Description | Vendor | Catalog # | Persistent ID / URL |
|---|--------------------------------|---------------|---|
| TP-10 and TP-10 succinate | Pfizer | N/A | N/A |
| Butanedione monoximime (BDM) | Sigma | B0753-100G | https://www.sigmaaldrich.com/US/en/product/sigma/b0753 |
| Creatine monophosphate | Sigma | C3630-100G | https://www.sigmaaldrich.com/US/en/product/sigma/c3630 |
| Taurine | Sigma | T8691-100G | https://www.sigmaaldrich.com/US/en/product/sigma/t8691 |
| ESI-09 | Sigma | SML0814 | https://www.sigmaaldrich.com/US/en/product/sigma/sml0814 |
| DT-2 trifluoroacetate salt | Sigma | D0444 | https://www.sigmaaldrich.com/US/en/product/sigma/d0444 |
| 8-pCPT-cGMP | Sigma | C5438 | https://www.sigmaaldrich.com/US/en/product/sigma/c5438 |
| Trypan Blue | Sigma | 302643 | https://www.sigmaaldrich.com/US/en/product/aldrich/302643 |
| Myristoylated PKI | Enzo Life Sciences | BML-P210-0500 | https://www.enzolifesciences.com/BML-P210/pki-14-22-amide-myristoylated/ |
| D(-)-Luciferin potassium salt | VWR | 10013-202 | https://us.vwr.com/store/product/22206183/d-luciferin-potassium-salt-staybritetm |
| Type 2 Collagenase | Worthington Biochemical | LS004176 | https://www.worthington-biochem.com/products/collagenase |
| Laminin | Corning | 354232 | https://ecatalog.corning.com/life-sciences/b2c/US/en/Surfaces/Extracellular-Matrices-ECMs/Corning%C2%AE-Laminin/p/354232 |
| Matrigel | Corning | 356234 | https://www.fishersci.com/shop/products/corning-matrigel-membrane-matrix-3/CB40234A |
| RP-8-Br-PET-cGMPs | Tocris | 5524 | https://www.rndsystems.com/products/rp-8-pcpt-cgmps-sodium_5524 |
| (-)-Blebbistatin | Cayman Chemical | 13013 | https://www.caymanchem.com/product/13013 |
| PolyGet Transfection Reagent | SigmaGen | SL100688 | https://signagen.com/In-Vitro-DNA-Transfection-Reagents/SL100688/PolyJet-DNA-In-Vitro-Transfection-Reagent |
| Thymidine [Methyl- ³ H] | PerkinElmer | NET027250UC | https://www.perkinelmer.com/product/thymidine-methyl-3h-net027250uc |
| ProLong gold antifade mountant | Invitrogen | P36930 | https://www.thermofisher.com/order/catalog/product/P36930#:~:text=ProLong%20Gold%20Antifade%20Mountant%20is,DNA%20stain%20SYTOX%20Dep%20Red. |
| FITC-conjugated WGA | Thermo Fisher Scientific | W11261 | https://www.fishersci.com/shop/products/wheat-germ-agglutinin-al/W11261 |
| Tetramethylrhodamine ethyl ester (TMRE) | Thermo Fisher Scientific | T669 | https://www.thermofisher.com/order/catalog/product/T669 |
| Dihydroethidium (DHE) | Invitrogen | D11347 | https://www.fishersci.com/shop/products/molecular-probes-dihydroethidium-hydroethidine-3/p-4924919 |
| Cell Counting Kit-8 | Dojindo Molecular Technologies | ck-04-11 | https://www.dojindo.com/products/CK04/ |
| TUNEL assay kit | Roche | 12156792910 | https://www.sigmaaldrich.com/US/en/product/roche/12156792910 |
| LDH cytotoxicity detection kit | Takara Bio | MK401 | https://www.sigmaaldrich.com/US/en/product/roche/11644793001 |
| Dead cell apoptosis kit with Annexin V FITC PI for flow cytometry | Thermo Fisher Scientific | V13242 | https://www.thermofisher.com/order/catalog/product/V13242 |

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|---------------------------------------|--------------------------|--------------|---|
| ReadyProbe cell viability imaging kit | Thermo Fisher Scientific | R10477 | N/A |
| Mouse cardiac troponin-I Elisa kit | Life Diagnostics | CTNI-1-HSP | https://lifediagnosics.com/shop/elisa-kits/cardiac-biomarker-elisa-kits/mouse-ctn-i-elisa-plasma/ |
| Duolink™ In Situ Red Starter Kit | Sigma | DUO92101-1KT | https://www.sigmaaldrich.com/US/en/product/sigma/duo92101 |