ADCY1 ADCY6 RGS1 ADCY2 ADCY7 **Epinephrine** Na2+ Ca2+ **Epinephrine** Acetylcholine RGS2 ADCY3 ADCY8 RGS3 ADCY4 ADCY9 RGS4 L-Type Ca2+ Channel a Adrenergic Receptor **b** Adrenergic Receptor **M1 Muscarinic Receptor** ADCY5 RGS5 ADRA1A CHRM1 CACNA1C CHRM4 CACNA1A ADRB1 **Adenylyl Protein Kinase A** RGS6 ADRA1B CACNA1D CHRM2 CHRM5 CACNA1B ADRB2 **Cyclases** PRKAR2B PRKAR1A RGS7 ADRA1D CHRM3 CACNA1S CACNA1E ADRB3 PRKAR1B PRKACA RGS9 b arrestin/GRK -PRKACB PRKAR2A **cAMP** G _{bg} **PKC inhibitor Protein-1** G alpha i/o/z Cytosolic Ca 2+ GNAS IMB04 23b CaM kinase YWHAB rrestin/GRK GNA11 KCNJ3 CAMK2A CAMK2G YWHAE **Protein Kinase A** Repolarization KCNJ5 CAMK2B YWHAH CAMK1 PLCB3 CAMK2D CJMB04_5e**1** CAMK4 PLCB3 KCNB1 Calmodulin GRK SR Calsequestrin S-Ca ²⁺ CALM1 GRK4 Calsequestrin C-Ca PIP2 Cytosol CALM2 GRK5 Calreticulin-Ca 2+ **IP3 Receptors** CALM3 IP3 DAG GRK6 ANXA6 CASQ1 ITPR1 CASQ2 ITPR2 G_b beta Arrestin RYR1 ► Ca ²⁺ CALR3 ITPR3 CJMB04 6n: GNB4 RYR2 Cytosolic Ca2+ IP4 GNB2 GNB5 RYR3 GNB3 **Protein Kinase C** ATP2A2 G g FKBP1A FKBP12 CJMB04_5a1 ATP2A3 GNGT1 GNG7 ADP PRKCB ADP + Pi GNG8 GNG2 PRKCG Phopholamban (P) PLN GNG3 GNG11 Na+ Na+ PRKCD GNG4 GNG12 Cytosolic Ca 2+ PRKCE **CaM kinase** GNG5 GNG13 Na+/K+ ATPase Dihydropyridine-Sensitive Na+/Ca2+ Exchanger ATP1A4 ATP1B3 ATP2B1 G alpha i/o/z CACNB1 ATP1B1 SLC8A3 FXYD2 ATP2B2 IP3 Receptors CACNB3 ATP1B2 SLC8A1 GNAI1 ATP2B3 GNAI2 Ca 2+ Ca 2+ Ca ²⁺ **GNAI3** Membrane GNA01 Depolarization GNAZ Connexin Ca 2+ **Gap Junctions (Connexins)** GJA1 GJA8 GJB1 GJA3 GJD2 GJB2 GJA4 GJA10 GJB3 GJA5 GJC2 GJB4 GJA6 GJB5

Adenylyl Cyclases

Regulators of G-protein Signaling

RGS10

RGS11

RGS14

RGS16

RGS17

RGS18

RGS19

RGS20

SFN

YWHAQ

СЈМВ04 1112

PKA Inhibitors

PKIA

PKIB

PKIG

PRKCH

PRKCH

JMB04_12k

PRKCQ

PRKCZ

ARRB1

ARRB2

Title: Calcium Regulation in the Cardia

GJC1

GJB6

Organism: Gallus gallus