α-Actinin Promotes Surface Localization and Ion Conducting Activity of the Ca^{2+} Channel $Ca_V1.2$ by Binding to the IQ Region of the α1 Subunit

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SUPPORTING INFORMATION

Table S1: ***Oligonucleotides used to create rabbit $\alpha_1$1.2 expression constructs utilizing NdeI/EcoRI restriction sites (underlined) for yeast two-hybrid interaction studies.***

AAs 1-123	5'	CCG CGC CAT ATG GTC AAT GAA AAC ACG AGG ATG
	3'	GCC CGG GAA TTC TAC CAT TCA ACA ATG CTG ATG CA
AAs 1506-1871	5'	GGC CCG CAT ATG GAC AAC TTT GAC TAC CTG ACA
	3'	CGG CCG GAA TTC AGA TCC TCA CGT CGT AGT TCT C
AAs 1506-1638	5'	GGC CCG CAT ATG GAC AAC TTT GAC TAC CTG ACA
	3'	CTC ATG AAT TCA TGC AGG GGG CAC CAC TTG GTC
AAs 1639-1871	5'	GTG CCC CAT ATG GGC GAT GAT GAG GTC ACA GTC
	3'	CGC TGC AGG AAT TCA GAT CCT CAC GTC GTA GTT GTC GTC
AAs 1506-1610	5'	GGC CCG CAT ATG GAC AAC TTT GAC TAC CTG ACA
	3'	CAG CTC CTG AAT TCA TTG TTC CAG GTT TCC TTC TGT

Table S2: ***Oligonucleotides used to produce human α-Actinin-1 expression constructs utilizing NdeI/EcoR1 restriction sites (underlined)for yeast two-hybrid interaction studies.***

SR234EF AAs 391-892	5'	CGG AGG CAT ATG CGA CTG GAC CAC CTG GCA GAG
	3'	CGC GTT GAA TTC TTA GAG GTC ACT CTC GCC GTA CAG
Full Length AAs 1-892	5'	CGC GAT CAT ATG GAC CAT TAT GAT TCT CAG C
	3'	CGC GTT GAA TTC TTA GAG GTC ACT CTC GCC GTA CAG C
CH12 AAs 1-260	5'	CGC GAT CAT ATG GAC CAT TAT GAT TCT CAG C
	3'	CTT GCG AAT TCA ATT GGC TGC TGT CTC CGC CTT
SR1234 AAs 261-740	5'	ACA GCA CAT ATG TGC ATC TGC AAG GTG TTG GCC
	3'	GCT GAG AAT TCA GGC ATC CCG GGT CAG GAT CTG
EF hands AAs 741-892	5'	ATC ACC CGG CAT ATG AAG GGC ATC AGC CAG GAG
	3'	CGC GTT GAA TTC TTA GAG GTC ACT CTC GCC GTA CAG
CH12SR1 AAs 1-390	5'	CGC GAT CAT ATG GAC CAT TAT GAT TCT CAG C
	3'	GTG GTG AAT TCA CTC CAG CCT CCG GAT CTC ATT
SR123 AAs 261-625	5'	ACA GCA CAT ATG TGC ATC TGC AAG GTG TTG GCC
	3'	CTC ATG AAT TCA CTG TCG GGC ATG CTC CTC CGT
SR4EF AAs 626-892	5'	CAT GCC CAT ATG CAG CAC AAT GAG AGG CTA CGC
	3'	CGC GTT GAA TTC TTA GAG GTC ACT CTC GCC GTA CAG C
SR234 AAs 391-740	5'	CGG AGG CAT ATG CGA CTG GAC CAC CTG GCA GAG
	3'	GCT GAG AAT TCA GGC ATC CCG GGT CAG GAT CTG
SR12 AAs 261-505	5'	ACA GCA CAT ATG TGC ATC TGC AAG GTG TTG GCC
	3'	CTG GTG AAT TCA CTC CAG CAG TTT CTC GGT CCG
SR34 AAs 506-740	5′	GAG AAA CTG CAT ATG ACC ATT GAC CAG CTG TAC TTG GAG
	3′	GCT GAG AAT TCA GGC ATC CCG GGT CAG GAT CTG

Table S3: ***Oligonucleotides used to create triple alanine mutations (underlined) in rabbit $\alpha_1$1.2 expression constructs for yeast two-hybrid interaction studies.***

AAA-1	5'	GCA GGC GAT GAT GAG GTC GCG GCC GCC AAG TTC TAC GCT ACC TTT
	3'	AAA GGT AGC GTA GAA CTT GGC GGC CGC GAC CTC ATC ATC GCC TGC
AAA-2	5'	GAT GAG GTC ACA GTC GGC GCG GCC GCC GCT ACC TTT CTG ATC CAA
	3'	TTG GAT CAG AAA GGT AGC GGC GGC CGC GCC GAC TGT GAC CTC ATC
AAA-3	5'	GTC GGC AAG TTC TAC GCG GCC GCT CTG ATC CAA GAG TAC
	3'	GTA CTC TTG GAT CAG AGC GGC CGC GTA GAA CTT GCC GAC
AAA-4	5'	AAG TTC TAC GCT ACC TTT GCG GCC GCA GAG TAC TTC CGG AAA TTC
	3'	GAA TTT CCG GAA GTA CTC TGC GGC CGC AAA GGT AGC GTA GAA CTT
AAA-5	5'	GCT ACC TTT CTG ATC CAA GCG GCC GCC CGG AAA TTC AAG AAG CGC
	3'	GCG CTT CTT GAA TTT CCG GGC GGC CGC TTG GAT CAG AAA GGT AGC
AAA-6	5'	ATC CAA GAG TAC TTC GCG GCC GCC AAG AAG CGC AAA GAG
	3'	CTC TTT GCG CTT CTT GGC GGC CGC GAA GTA CTC TTG GAT
AAA-7	5'	TAC TTC CGG AAA TTC GCG GCC GCC AAA GAG CAA GGG CTT
	3'	AAG CCC TTG CTC TTT GGC GGC CGC GAA TTT CCG GAA GTA
AAA-8	5'	CGG AAA TTC AAG AAG CGC GCG GCC GCC GGG CTT GTG GGC AAG CCC
	3'	GGG CTT GCC CAC AAG CCC TGC GGC CGC GCG CTT CTT GAA TTT CCG
AAA-9	5'	AAG CGC AAA GAG CAA GCG GCC GCC GGC AAG CCC TCC CAG
	3'	CTG GGA GGG CTT GCC GGC GGC CGC TTG CTC TTT GCG CTT

Table S4: ***Oligonucleotides used to create single alanine mutations (underlined) in rabbit $\alpha_1$1.2 expression constructs for yeast two-hybrid interaction studies and pull-down assays.***

K1647A	5'	GAT GAG GTC ACA GTC GGC GCA TTC TAC GCT ACC TTT CTG ATC CAA
	3'	TTG GAT CAG AAA GGT AGC GTA GAA TGC GCC GAC TGT GAC CTC ATC
F1648A	5'	GAT GAG GTC ACA GTC GGC AAG GCA TAC GCT ACC TTT CTG ATC CAA
	3'	TTG GAT CAG AAA GGT AGC GTA TGC CTT GCC GAC TGT GAC CTC ATC
Y1649A	5'	GAT GAG GTC ACA GTC GGC AAG TTC GCA GCT ACC TTT CTG ATC CAA
	3'	TTG GAT CAG AAA GGT AGC TGC GAA CTT GCC GAC TGT GAC CTC ATC
L1653A	5'	AAG TTC TAC GCT ACC TTT GCA ATC CAA GAG TAC TTC CGG AAA TTC
	3'	GAA TTT CCG GAA GTA CTC TTG GAT TGC AAA GGT AGC GTA GAA CTT
I1654A	5'	AAG TTC TAC GCT ACC TTT CTG GCA CAA GAG TAC TTC CGG AAA TTC
	3'	GAA TTT CCG GAA GTA CTC TTG TGC CAG AAA GGT AGC GTA GAA CTT
Q1655A	5'	AAG TTC TAC GCT ACC TTT CTG ATC GCA GAG TAC TTC CGG AAA TTC
	3'	GAA TTT CCG GAA GTA CTC TGC GAT CAG AAA GGT AGC GTA GAA CTT

Table S5: ***Oligonucleotides used to create single alanine mutations (underlined) in rat $\alpha_1$1.2 expression constructs for electrophysiological and surface expression assays.***

K1647A	5'	GAC GAG GTC ACA GTG GGC GCA TTC TAT GCC ACC TTC CTG
	3'	CAG GAA GGT GGC ATA GAA TGC GCC CAC TGT GAC CTC GTC
F1648A	5'	GAG GTC ACA GTG GGC AAA GCC TAT GCC ACC TTC CTG ATC
	3'	GAT CAG GAA GGT GGC ATA GGC TTT GCC CAC TGT GAC CTC
Y1649A	5'	GTC ACA GTG GGC AAA TTC GCT GCC ACC TTC CTG ATC CAA
	3'	TTG GAT CAG GAA GGT GGC AGC GAA TTT GCC CAC TGT GAC
I1654A	5'	TTC TAT GCC ACC TTC CTG GCC CAA GAG TAC TTC AGG AAA
	3'	TTT CCT GAA GTA CTC TTC GGC CAG GAA GGT GGC ATA GAA
Q1655A	5'	TAT GCC ACC TTC CTG ATC GCA GAG TAC TTC AGG AAA TTC
	3'	GAA TTT CCT GAA GTA CTC TGC GAT CAG GAA GGT GGC ATA
F1658A	5'	TTC CTG ATC CAA GAG TAC GCC AGG AAA TTC AAG AAG CGA
	3'	TCG CTT CTT GAA TTT CCT GGC GTA CTC TTG GAT CAG GAA