

Supplemental Data

SUPPLEMENTAL FIGURE LEGENDS

FIGURE S1. Alignment of the amino acid sequence of the S Tail. The predicted S tails from the indicated animal species were aligned with the human S tail using the ClustalW2 program. Amino acids different from those in the human S tail are in red. The length of each S tail is indicated on the right. Note that the predicted rabbit and mouse S tails are 14 and 22 amino acids shorter than the human S tail.

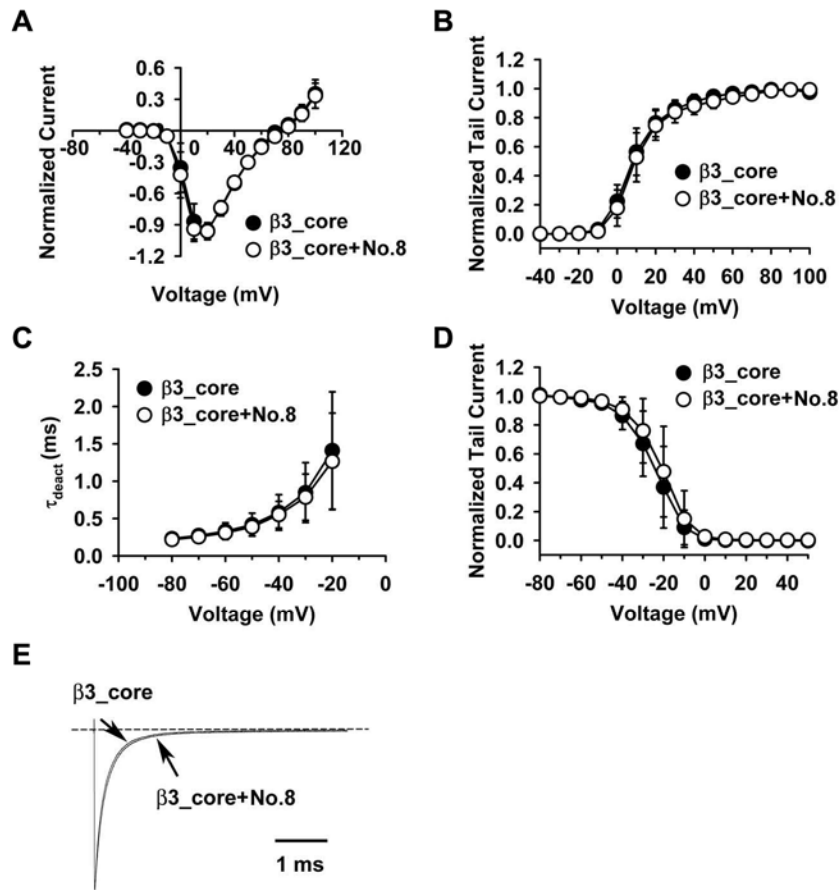
FIGURE S2. Lack of effect of the S tail on Ca^{2+} channel properties. cRNA of No.8 was co-injected into *Xenopus* oocytes with the channel complex cRNAs, and cell-attached patch clamps (A-E) were performed. β_3 _core, amino acids G16-G366 of full length β_3 , is as potent as β_3 to regulate channel activation and membrane targeting (5,45). A, current-voltage relationship. B, voltage-dependent activation. C, deactivation constant τ_{deact} . D, voltage-dependent inactivation. E, representative inactivation traces. N=5-6.

FIGURE S3. Co-localization of overexpressed No.8 and β_3 in the nuclei of HEK 293T cells. A, No.8 (fused with DsRed) and β_3 (fused with EGFP) were expressed separately. B, three individual examples, displayed in three rows, showing the co-localization of No.8 and β_3 in the nuclei when they were co-expressed. Note that the two proteins aggregate on the nuclear membrane. Bar, 10 μm .

Zhang et al., Figure S1

Human	VSAAGGGLHNPGR-EVRSGSGPADLIGCVCTLESFSHYSDWLDQSSRRQSIPSLSD-	57
Chimpanzee	VSAAGGGLHNPGR-EVRSGSGPADLIGCVCTLESFSHYSDWLDQSSRRQSIPSLSD-	57
Sumatran orangutan	VSAAGGGLHNPGR-EVRSGSRPVDLIGCVCTLESFLHYSDWFDQSSRRQSIPSLSD-	57
Olive baboon	VSAAGGGLHNPGR-EVRSGSGPADLVGCVCTPGSFSHYSDWFDQSSRRQSIPCLSD-	57
Rhesus monkey	VSAAGGGLHNPGR-EVRSGSGPADLVGCVCAHGSFSHYSDWFDQSSRRQSIPSLSD-	57
Rabbit	VSEASGLLNGLRGETSNGSG-AAPLG--ASLPTVIG-----LTSQVQDS	43
Mouse	VREDGHLH----R--ARDGFRLADPIHCIYSLG-----PSCDSD-	35

Zhang et al., Figure S2



Zhang et al., Figure S3

