

Supplemental Material

Research Articles | Neurobiology of Disease

In Vivo Expression of an SCA27A-linked FGF14 Mutation Results in Haploinsufficiency and Impaired Firing of Cerebellar Purkinje Neurons

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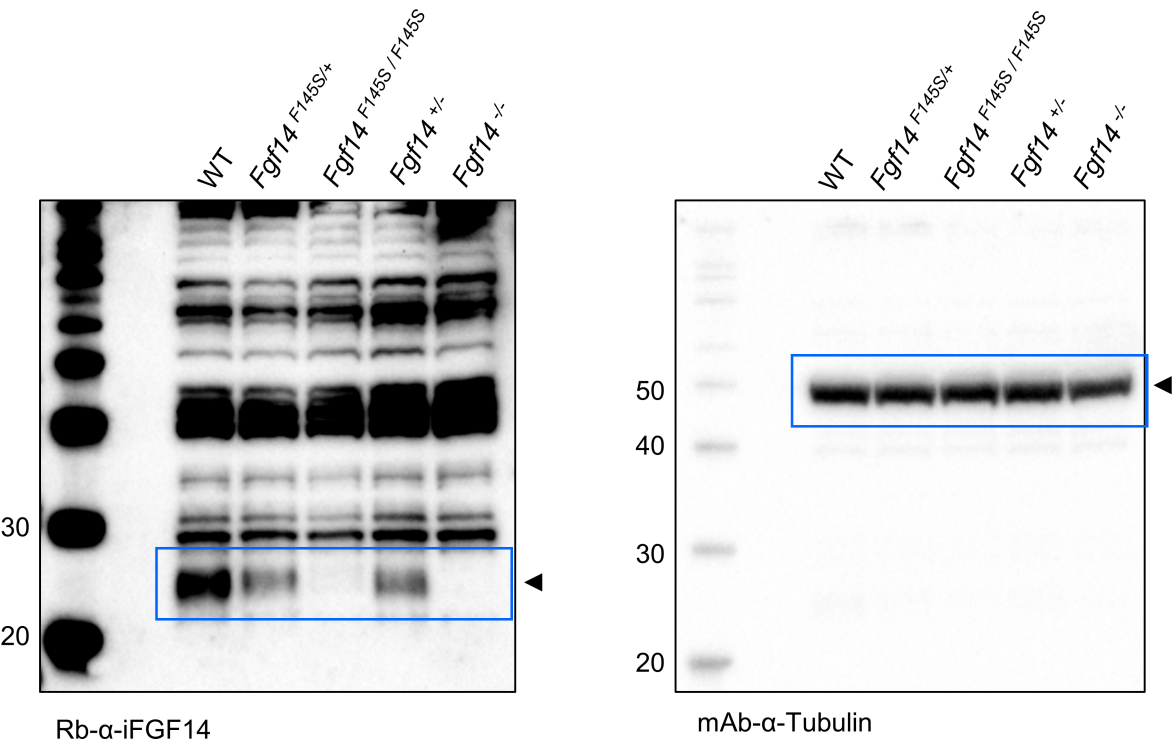
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Figure S1

Human FGF14A	- - - MAAA I A S G L I R Q K R Q A R E Q H W D R P S A S R R R S S P S K N R G L C N G N L V D I F S K V R I F G L K K R R L R R - Q	DPQLKGI VTRLYCRQGY L	83
Mouse FGF14A	- - - MAAA I A S G L I R Q K R Q A R E Q H W D R P S A S R R R S S P S K N R G L C N G N L V D I F S K V R I F G L K K R R L R R - Q	DPQLKGI VTRLYCRQGY L	83
Human FGF14B	M V K P V P L F R R T D F K L L L C N H K D L F F L R V S K L L D C F S P K S M W F L W N I F S K G T H M L Q C L C G K S L K K N K N P T	DPQLKGI VTRLYCRQGY L	88
Mouse FGF14B	M V K P V P L F R R T D F K L L L C N H K G L F F L R V S K L L G C F S P K S M W F L W N I F S K G T H M L Q C L C G K S L K K N K N P T	DPQLKGI VTRLYCRQGY L	88
Human FGF14A	Q M H P D G A L D G T K D D S T N S T L F N L I P V G L R V V A I Q G V K T G L Y I A M N G E G Y L Y P S E L F T P E C K F K E S V F E N Y Y V I Y S S M L Y R Q Q E S G R A W		171
Mouse FGF14A	Q M H P D G A L D G T K D D S T N S T L F N L I P V G L R V V A I Q G V K T G L Y I A M N G E G Y L Y P S E L F T P E C K F K E S V F E N Y Y V I Y S S M L Y R Q Q E S G R A W		171
Human FGF14B	Q M H P D G A L D G T K D D S T N S T L F N L I P V G L R V V A I Q G V K T G L Y I A M N G E G Y L Y P S E L F T P E C K F K E S V F E N Y Y V I Y S S M L Y R Q Q E S G R A W		176
Mouse FGF14B	Q M H P D G A L D G T K D D S T N S T L F N L I P V G L R V V A I Q G V K T G L Y I A M N G E G Y L Y P S E L F T P E C K F K E S V F E N Y Y V I Y S S M L Y R Q Q E S G R A W		176
Human FGF14A	F L G L N K E G Q A M K G N R V K K T K P A A H F L P K P L E V A M Y R E P S L H D V G E T V P K P G V T P S K S T S A S A I M N G G K P V N K S K T T		247
Mouse FGF14A	F L G L N K E G Q V M K G N R V K K T K P A A H F L P K P L E V A M Y R E P S L H D V G E T V P K A G V T P S K S T S A S A I M N G G K P V N K C K T T		247
Human FGF14B	F L G L N K E G Q A M K G N R V K K T K P A A H F L P K P L E V A M Y R E P S L H D V G E T V P K P G V T P S K S T S A S A I M N G G K P V N K S K T T		252
Mouse FGF14B	F L G L N K E G Q V M K G N R V K K T K P A A H F L P K P L E V A M Y R E P S L H D V G E T V P K A G V T P S K S T S A S A I M N G G K P V N K C K T T		252

Figure S2



Supplemental Material Legends

Figure S1. Protein sequences of the human and mouse iFGF14A/iFGF114B proteins. The iFGF core domain is underlined in black; the one residue in the core domain and the two residues in the C-terminal domains that are different in the human and mouse iFGF14A/14B proteins are indicated by the red boxes. The distinct N termini of the human/mouse iFGF14A and iFGF14B proteins are highlighted in yellow and green, respectively, and the two residues that are distinct in the N-termini of the human and mouse iFGF14B proteins are indicated by red boxes. The phenylalanine (F) residue in the core domain that was replaced by a serine (S) in the *Fgf14*^{F145S/+} mutant mouse line is highlighted in pink.

Figure S2. Western Blot Images

Full Western blot of fractionated total protein lysates, prepared from cerebellar tissues isolated from adult wild type, *Fgf14*^{F145S/+}, *Fgf14*^{F145S/F145S}, *Fgf14*^{+/-}, and *Fgf14*^{-/-} animals, probed with a rabbit polyclonal α-iFGF14 antiserum (Rb-α-iFGF14), are shown; the arrowheads indicate the iFGF14 protein (reduced in the *Fgf14*^{F145S/+} and *Fgf14*^{+/-} samples and missing in the *Fgf14*^{F145S/F145S} and *Fgf14*^{-/-} samples). As shown in the right panel, membranes were also probed with a mAb-α-tubulin antibody. The regions outlined by the blue boxes indicate the parts of the blots shown in **Figure 3E**.