

**Supplemental Data**

**$\beta$ IV Spectrinopathies Cause  
Profound Intellectual Disability, Congenital Hypotonia,  
and Motor Axonal Neuropathy**

**Chih-Chuan Wang, Xilma R. Ortiz-González, Sabrina W. Yum, Sara M. Gill, Amy White, Erin Kelter, Laurie H. Seaver, Sansan Lee, Graham Wiley, Patrick M. Gaffney, Klaas J. Wierenga, and Matthew N. Rasband**

Supplemental Fig. 1. Alignment of human pathogenic *SPTBN4* variants with and their equivalent locations in mouse *Sptbn4*.

**Gln605\***

Human	599	LRFSQLQGYQPCDPQVICNRVNHHGCLAELEAQAAARRRAEASRSLWALLQELEEEAES	658
		LRFSQLQGYQPCDPQVICNRVNHHGCL+ELQEQAARRRAEASRSLWALLQELEEEAES	
Mouse	600	LRFSQLQGYQPCDPQVICNRVNHHGCLSELQEQAARRRAEASRSLWALLQELEEEAES	659

**Trp903\***

Human	899	EKEQWLLSMRVPDSDLDDVEVVQHRFESLDQEMNSLMGRVLDVNHTVQELVEGGHPSSDEV	958
		EKEQWLL+MRVPDSDLDDVEVVQHRFESLDQEMNSLMGRVLDVN TVQELVEGGHPSSDEV	
Mouse	895	EKEQWLLAMRVPDSDLDDVEVVQHRFESLDQEMNSLMGRVLDVNQTVQELVEGGHPSSDEV	954

**Glu1274\***

Human	1259	VQAAEGLLRQGNIYGEQAQEAVENTRLLEKNQENQLRAQQWMQKLHDQLELQHFLRDCHELD	1318
		VQAAE LLRQGN YGEQAQEAVENTRLLEKNQENQLRAQQWMQKL DQL LQHFLRDCHELD	
Mouse	1255	VQAAESSLRQGNAYGEQAQEAVENTRLLEKSQENQLRAQQWMQKLLDQLVLQHFLRDCHELD	1314

**Gln1277Argfs\*4**

Query	1259	VQAAEGLLRQGNIYGEQAQEAVENTRLLEKNQENQLRAQQWMQKLHDQLELQHFLRDCHELD	1318
		VQAAE LLRQGN YGEQAQEAVENTRLLEKNQENQLRAQQWMQKL DQL LQHFLRDCHELD	
Sbjct	1255	VQAAESSLRQGNAYGEQAQEAVENTRLLEKSQENQLRAQQWMQKLLDQLVLQHFLRDCHELD	1314

**Arg504Gln**

Human	479	AAYEERVQGVAELAQALAAEGYYDIRVAAQRDSVLRQWALLTGLVGARRTRLEQNLALQ	538
		AAYEERVQGVAELAQALAAEGYYD DIRVAAQRDSVLRQWALLTGLVGARRTRLEQNLALQ	
Mouse	480	AAYEERVQGVAELAQALAAEGYYDARRVAAQRDSVLRQWALLTGLVGARRTRLEQNLALQ	539

**Arg2435Cys**

Human	2398	SRSAPAQGGSAPAPPPPTHTVQHEGFLRKRELDANRKSSNRSWVSLYCVLSKGELGFY	2457
		SRSAPAQGGSAPAPPPPTHTVQHEGFLRKRELDANRKSSNRSWVSLYCVLSKGELGFY	
Mouse	2395	SRSAPAQGGSAPAPPPPTHTVQHEGFLRKRELDANRKSSNRSWVSLYCVLSKGELGFY	2454

**Ala2485Leufs\*31**

Human	2458	KDSKGPAAGSTHGGEPLLSLHKATSEVASDYKKKKHVFKLQTQDGSEFLLQAKDEEEMNG	2517
		KDSKGPAAGSTHGGEPLLSLHKATSEVASDYKKKKHVFKLQTQDGSEFLLQAKDEEEMNG	
Mouse	2455	KDSKGPAAGSTHGGEPLLSLHKATSEVASDYKKKKHVFKLQTQDGSEFLLQAKDEEEMNG	2514