

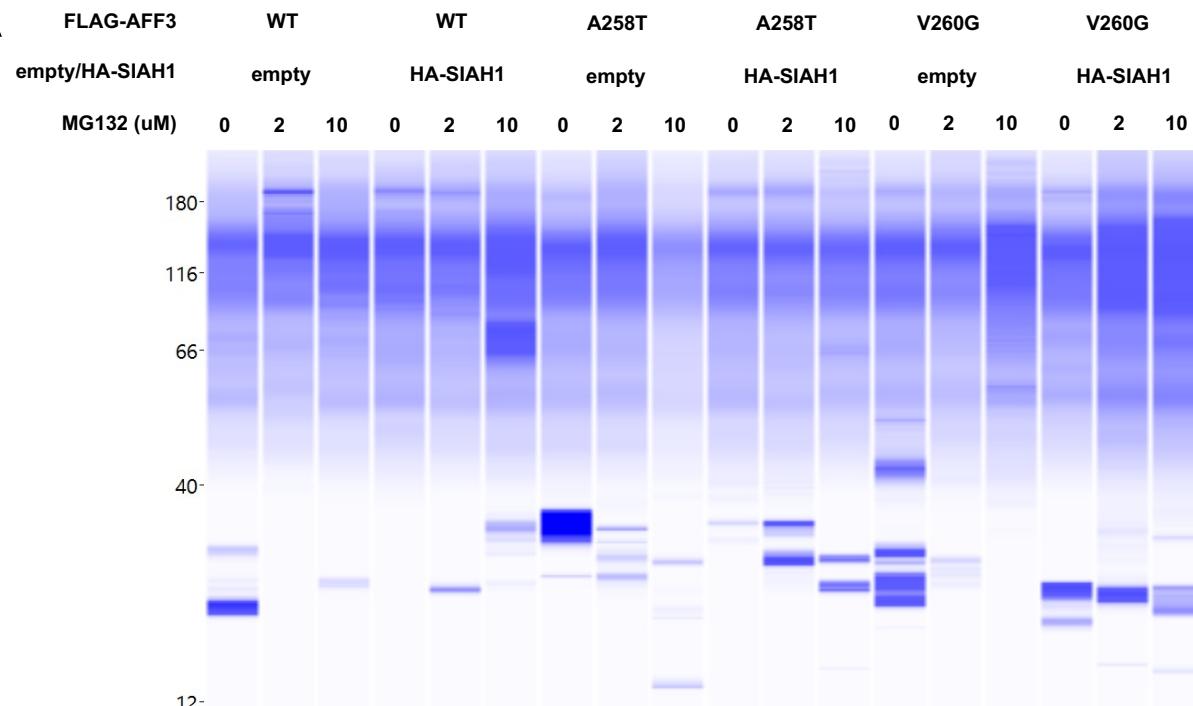
Supplemental information

**Variants in the degron of AFF3 are associated with
intellectual disability, mesomelic dysplasia,
horseshoe kidney, and epileptic encephalopathy**

Norine Voisin, Rhonda E. Schnur, Sofia Douzgou, Susan M. Hiatt, Cecilie F. Rustad, Natasha J. Brown, Dawn L. Earl, Boris Keren, Olga Levchenko, Sinje Geuer, Sarah Verheyen, Diana Johnson, Yuri A. Zarate, Miroslava Hančárová, David J. Amor, E. Martina Bebin, Jasmin Blatterer, Alfredo Brusco, Gerarda Cappuccio, Joel Charrow, Nicolas Chatron, Gregory M. Cooper, Thomas Courtin, Elena Dadali, Julien Delafontaine, Ennio Del Giudice, Martine Doco, Ganka Douglas, Astrid Eisenkölbl, Tara Funari, Giuliana Giannuzzi, Ursula Gruber-Sedlmayr, Nicolas Guex, Delphine Heron, Øystein L. Holla, Anna C.E. Hurst, Jane Juusola, David Kronn, Alexander Lavrov, Crystle Lee, Séverine Lorrain, Else Merckoll, Anna Mikhaleva, Jennifer Norman, Sylvain Pradervand, Darina Prchalová, Lindsay Rhodes, Victoria R. Sanders, Zdeněk Sedláček, Heidelis A. Seebacher, Elizabeth A. Sellars, Fabio Sirchia, Toshiki Takenouchi, Akemi J. Tanaka, Heidi Taska-Tench, Elin Tønne, Kristian Tveten, Giuseppina Vitiello, Markéta Vlčková, Tomoko Uehara, Caroline Nava, Binnaz Yalcin, Kenjiro Kosaki, Dian Donnai, Stefan Mundlos, Nicola Brunetti-Pierri, Wendy K. Chung, and Alexandre Reymond

Figure S1

A



B

Sample	Primary	PN (%)
AFF3 WT + empty	Flag M2- SLCD3990	100
AFF3 WT +empty + MG132 -2	Flag M2- SLCD3990	103
AFF3 WT +empty + MG132 -10	Flag M2- SLCD3990	104
AFF3 WT +SIAH	Flag M2- SLCD3990	107
AFF3 WT +SIAH + MG132-2	Flag M2- SLCD3990	103
AFF3 WT +SIAH + MG132-10	Flag M2- SLCD3990	117
AFF3 A258T +empty	Flag M2- SLCD3990	104
AFF3 A258T +empty + MG132 -2	Flag M2- SLCD3990	104
AFF3 A258T +empty + MG132 -10	Flag M2- SLCD3990	84
AFF3 A258T +SIAH	Flag M2- SLCD3990	102
AFF3 A258T +SIAH + MG132-2	Flag M2- SLCD3990	101
AFF3 A258T +SIAH + MG132-10	Flag M2- SLCD3990	99
AFF3 V260G +empty	Flag M2- SLCD3990	110
AFF3 V260G +empty + MG132 -2	Flag M2- SLCD3990	100
AFF3 V260G +empty + MG132 -10	Flag M2- SLCD3990	114
AFF3 V260G +SIAH	Flag M2- SLCD3990	103
AFF3 V260G +SIAH + MG132 -2	Flag M2- SLCD3990	122
AFF3 V260G +SIAH + MG132 -10	Flag M2- SLCD3990	124

Figure S1: Loading control and normalization of the FLAG immuno-assays presented in Figure 2A. Protein extracts were separated by capillarity on a Jess system and immuno-assayed with an anti-FLAG antibody. (A) Fluorochrome fixation for normalisation of protein extracts of the Jess run. (B) Normalisation values of all samples in percent (PN) using as reference the protein extract FLAG-AFF3 WT and empty vector.

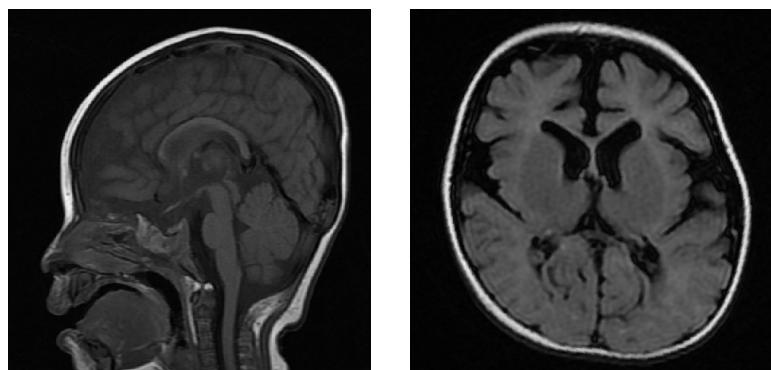


Figure S2: Brain MRI of proband 11 carrying a *de novo* variant in *AFF3*.
FLAIR (right) and T1 (left) at 9 months old are shown.

Table S2: Phenotypes of Aff3del/del homozygous in-frame truncation (chimeric mice from diploid aggregation with homozygous ES cells

phenotype	E18.5		E14.5		E14.5/E18.5 combined	
	numbers	pct[%]	numbers	pct[%]	numbers	pct[%]
polydactyly	5	42	1	25	6	38
mesomelic dysplasia	12	100	4	100	16	100
triangular tibia	12	100	4	100	16	100
hypoplastic fibula	12	100	4	100	16	100
hypoplastic pelvis	12	100	NA		NA	
craniofacial dysmorphism	12	100	4	100	16	100
delayed ossification (skull)	12	100	NA		NA	
intestinal prolapse	10	83	NA		NA	
lack of motoric reflexes /neurological dysfunction	12	100	NA		NA	
reduces body size	12	100	4	100	16	100
abort	1	8	0	0	1	6
total numbers of fetuses (abort excluded)	12	100	4	100	16	100
total numbers of litters	3		1		4	

motoric reflex = touch triggers contraction in E18.5

NA = not available, not investigated, in case of motoric reflexes not applicable