Supplementary Table S1. Comparison of *Rpgr* mutant mice

Mutant	Rod ERG [% of WT]							Cone ERG [% of WT]							ONL Thickness [% of WT]							Altitudinal effect
		Age [m]							Age [m]							Age [m]							
		< 2	3-5	6-8	9-10	11-16	24		< 2	3-5	6-8	9-10	11-16	24		< 2	3-5	6-8	9-10	11-16	24	
Rpgr $^{\Delta Ex4}$ BALB/c[1]	*	83	88	85	75	70			70	75	65	62	40			100	100	100	85	85			nr
Rpgr $^{\Delta Ex4}$ BL/6[1]	*	95	87	85	70	80			100	100	100	80	100			100	100	90	90	85			nr
rd9[2]	*	90	60			50	35		80	70			50	35		100				80	50		nr
Rpgr-null[3,4,5]	*	100		75		50					69		40			95†		65†		55†	50		nr
Rpgr-null + ORF15 Tg (#1)[4]	*	10							nr							50	10†						nr
Rpgr-null + ORF15 Tg (#2)[5]	*					70							70							95†			nr
Rpgr-null + mRDef[6]	*	nr														50†	20†		0				nr
Rpgr-null + mRORF[6]	*	nr															100						nr
Rpgr- cko			65	60	52	23					60	55	50	17			85	73	74	35			Observed by 11-15 m

* Data from original publication (stated in text or extracted from plots).
† Estimated from histology illustrations.
nr: not reported
Vertical bars to the left of each subsection of data: gray bars mark the 100% level for comparison; dark bars reproduce the numerical data, when reported, shown to the right.

References

1. Brunner S, Skosyrski S, Kirschner-Schwabe R, et al. Cone versus rod disease in a mutant Rpgr mouse caused by different genetic backgrounds. *Invest Ophthalmol Vis Sci.* 2010;51:1106-1115.

2. Thompson DA, Khan NW, Othman MI et al. Rd9 is a naturally occurring mouse model of a common form of retinitis pigmentosa caused by mutations in RPGR-ORF15. *PLoS One.* 2012;7:e35865.

3. Hong DH, Pawlyk BS, Shang J, Sandberg MA, Berson EL, Li T. A retinitis pigmentosa GTPase regulator (RPGR)-deficient mouse model for X-linked retinitis pigmentosa (RP3). *Proc Natl Acad Sci U S A*. 2000 Mar 28;97(7):3649-3654.

4. Hong DH, Pawlyk BS, Adamian M, and Li T. Dominant, gain-of-function mutant produced by truncation of RPGR. *Invest Ophthalmol Vis Sci.* 2004;45:36-41.

5. Hong DH, Pawlyk BS, Adamian M, Sandberg MA, and Li T. A single, abbreviated RPGR-ORF15 variant reconstitutes RPGR function in vivo. *Invest Ophthalmol Vis Sci.* 2005;46:435-41.

6. Wright RN, Hong DH, and Perkins B. Misexpression of the constitutive RPGRex1-19 variant leads to severe photoreceptor degeneration. *Invest Ophthalmol Vis Sci.* 2012;52:5189-5201.