A

Fluorescence vs. Cycles

- ONL/rho
- ONL/rho (RT-)
- INL/rho
- INL/rho (RT-)

B

Fluorescence vs. Cycles

ONL
- Dp427
- Dp260
- Dp140

C

Fluorescence vs. Cycles

INL
- Dp427
- Dp260
- Dp140
Supplementary figure 1: Dystrophins mRNA detection following laser microdissection of the ONL and INL.

(A) To test for genomic contamination, part of mRNA extracted from the ONL (blue lines) and INL (red lines) were not subjected to reverse transcription (dotted lines). Only samples for which PCR with rhodopsin primers did not give any signal were further processed. After reverse transcription (solid lines), only ONL samples positive and INL samples negative for rhodopsin amplification were considered. (B-C) real-time PCR amplification profiles obtained with primers specific for Dp427 (red), Dp260 (green) and Dp140 (blue) mRNA on ONL (B) and INL (C) extracts.
Supplementary figure 2: Validation of the Dp427 probe

In situ hybridization with the Dp427 antisense (a-e) or sense (f-j) probe on sections from gastrocnemian muscle (a, f), cerebellum (b, c, g, h), hippocampus (d, i) and inferotemporal cortex (e, j). Scale bars: 50 µm in a, c, f, h and 250 µm in other panels.
Supplementary Figure 3
**Supplementary figure 3: Partial colocalization of dystrophins and NKCC.**

Vertical sections of mouse retina double stained for all dystrophins (dys, corresponding to H4 antibody, red in merged image) and the NKCC chloride transporter, expressed at the tip of ON bipolar cell dendrites (green in merged image). Maximal projection of 4 consecutive confocal planes corresponding to a depth of 0.37 µm. Scale bar: 2 µm.
Supplementary Figure 4
Supplementary figure 4: Comparative quantification of dystrophin immunostaining in cone and rod terminals.

Confocal image from a dystrophin staining with the pan-dystrophin H4 antibody, on a WT retina (maximal projection of 18 consecutive focal planes, corresponding to 4.15 µm). The co-staining with the C5G5 antibody is not shown for clarity. Quantification of immunostaining was performed in ImageJ. Lines were drawn either through a group of aligned spherules (red lines) or through a pedicle (green lines). Pixel values were obtained from the two channels (using the sync Windows plugin and the Plot profile command). Example profiles of a pedicle (left) and of two spherules (right) are shown below. For a given terminal, pixel values were averaged over the distance from the half maximums on either side.
Supplementary Figure 5
Supplementary Figure 5: Electron microscopy pre-embedding and Tokuyasu immunolocalization of dystrophins in the OPL

Pre-embedding immunolabeling showing the distribution of the dystrophins in a rod spherule (A) and in a cone pedicle (B). The electron dense DAB precipitate accumulates along the presynaptic plasma-membrane where the photoreceptor contacts the dendrites of the bipolar cells. (C and D) Post-embedding immunogold labeling of the dystrophins in the OPL. The signal is visible in invaginated structures below the synaptic ribbon (R) and the horizontal cell processes (H), though the low contrast precluded establishing if some of the labeled elements belong to bipolar cell dendrites. Scale bars: 500 nm in A and B, 60 nm in C and D.