Supplemental Data
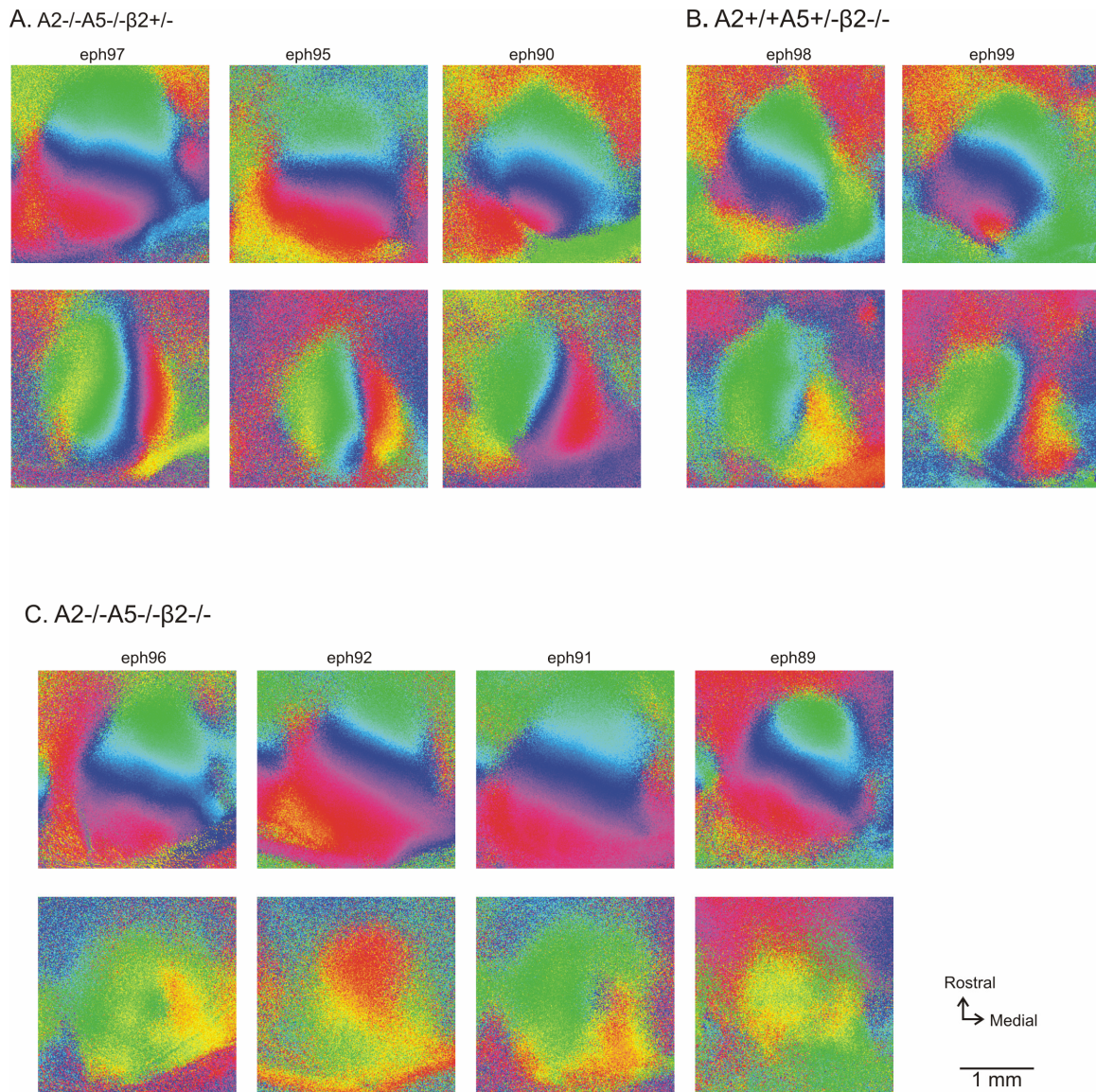
Selective Disruption of One Cartesian Axis of Cortical Maps and Receptive Fields by Deficiency in Ephrin-As and Structured Activity

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A. A2-/-A5-/-β2+/-

eph97   eph95   eph90

B. A2+/+A5+/-β2-/-

eph98   eph99

C. A2-/-A5-/-β2-/-

eph96   eph92   eph91   eph89

Rostral
Medial

1 mm

Supplemental Figure 1. Examples of cortical retinotopic maps in mice of different genotypes.

(A) Elevation (upper panel) and azimuth (lower panel) maps of three A2$^{-/-}$A5$^{-/-}$β2$^{+/-}$ mice. The color code used to represent positions in the visual field is the same as in Fig. 1. The text "eph##" on top of each column is the ID of the animal from which the maps were obtained.

(B) Two examples of A2$^{+/+}$A5$^{+/-}$β2$^{-/-}$ mice. (C) Four examples of the A2$^{-/-}$A5$^{-/-}$β2$^{-/-}$ combination KOs.
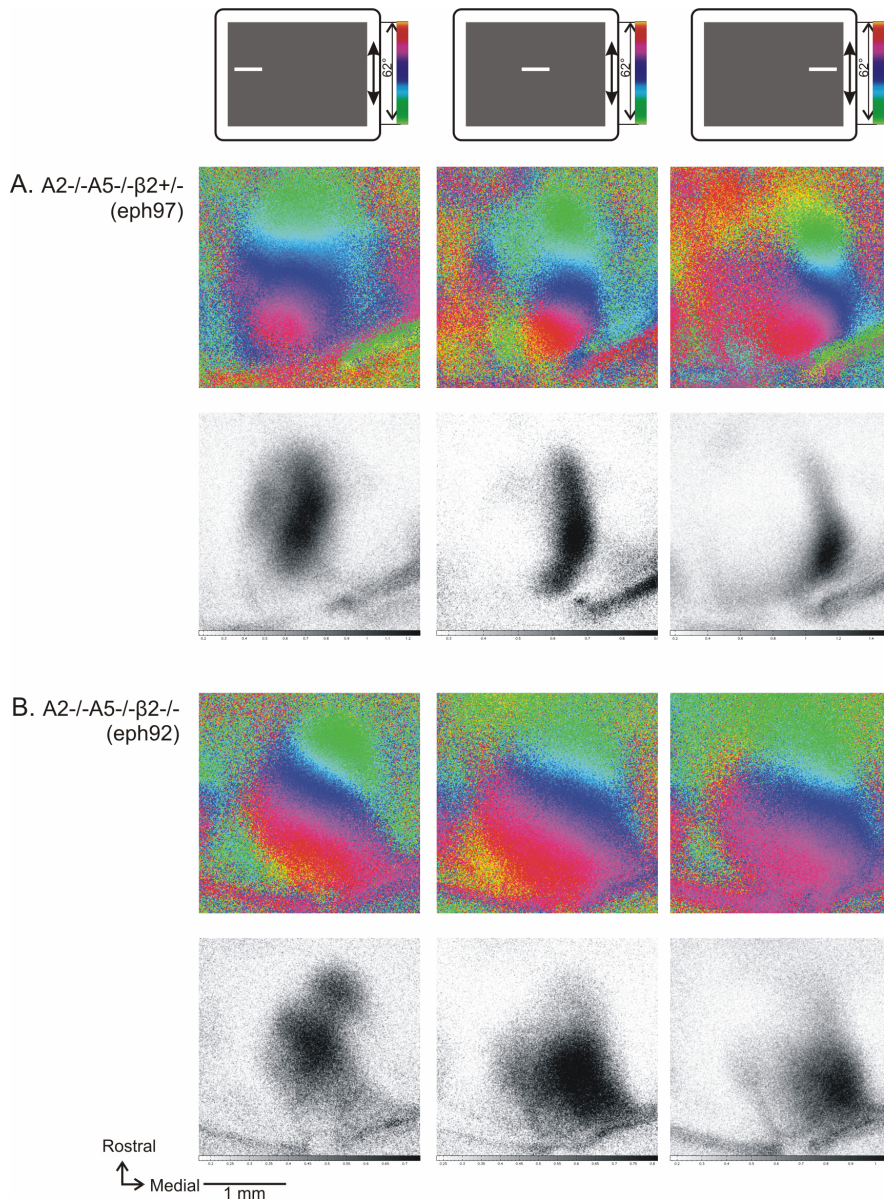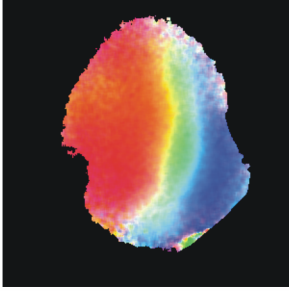
Supplemental Figure 2. Example maps obtained by spatially restricted stimuli.

(A) Phase (upper panel) and amplitude (lower panel) maps of an $A2^{-/-}A5^{-/-}\beta2^{+/-}$ mouse in response to short bars drifting along different azimuth position (as diagramed in the top row).
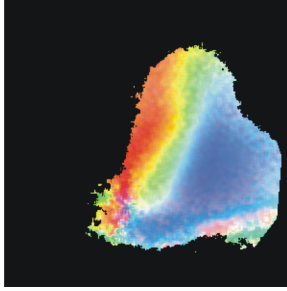
(B) The same maps of an ephrin-A2A5-β2 combination KO.

A. A2-/-A5-/-β2+/-, Hets

Eph97   M016   M019
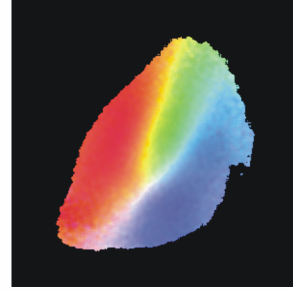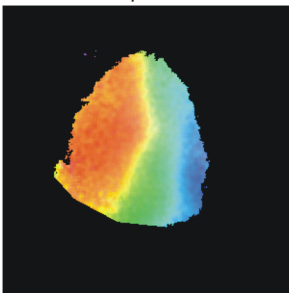
B. A2+/-A5+/-β2-/-, Hets

Eph98   Eph99
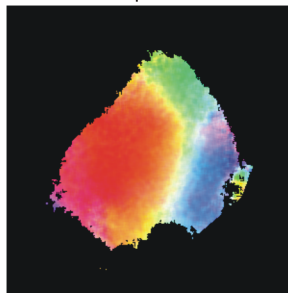
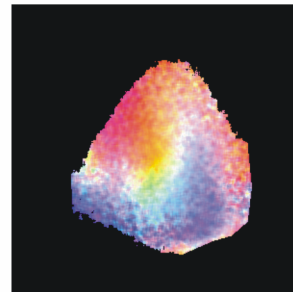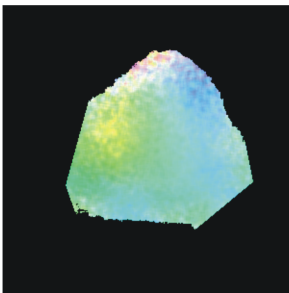C. A2-/-A5-/-β2-/-, combination Kos
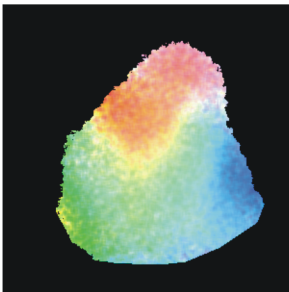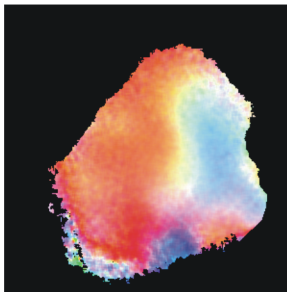
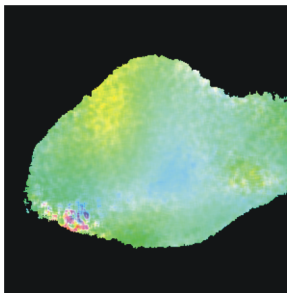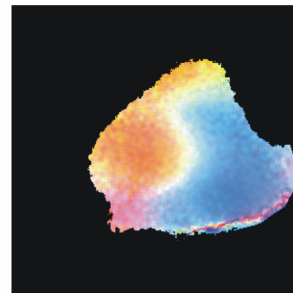Eph92   Eph96   M017

M018   M027   M038

Supplemental Figure 3. Examples of maps obtained with short bar stimuli. All 6 cases studied with this technique in the combination KO animals are illustrated, along with representative cases from WT and heterozygous animals.