Figure S1. **Silencing Grb7 does not affect actin mRNA distribution.** RT-qPCR assay of actin mRNA from nuclear or cytoplasmic fractions of rat DRG neurons or P19 cells. Control siRNA– or Grb7 siRNA–transfected cells treated with or without EGF are shown. Error bars represent SDs. The efficiency of silencing Grb7 is shown on the bottom. CY, cytoplasmic fraction; NE, nuclear fraction.
Figure S2. Δ9 Grb7 fails to interact with HuR but retains RNA-binding affinity and repressive activity. (A) Western blots of immunoprecipitated WT Flag-Grb7 or Δ9 Flag-Grb7 from WT Flag-Grb7- or Δ9 Flag-Grb7–transfected P19 cells detected with anti-HuR or anti-Flag antibodies. Input of immunoprecipitation (IP) is shown on the bottom. IB, immunoblot. (B) Autoradiography of Δ35S-labeled WT Grb7 or Δ9 Grb7 in GST pull-down (left) or GST-HuR pull-down. Labeled Grb7 and GST proteins are shown on the bottom and right, respectively. (C) RNA gel shift of KOR 5′ untranslated region (UTR) by increasing the amount of WT GST-Grb7 or Δ9 GST-Grb7. (D) Autoradiography of in vitro translation of GFP or GFP-containing KOR untranslated regions in the presence of GST, WT GST-Grb7, or Δ9 GST-Grb7.
Figure S3. **SHP-2 mediates EGF-induced nuclear dephosphorylation of Grb7.** (A) Direct interaction between SHP-2 and Grb7 performed by GST-Grb7 pulling down 35S-labeled Flag–SHP-2. The SH2 domain-deleted GST-Grb7 failed to pull down SHP-2. GST proteins used are shown on the right. Predicted GST proteins are marked with arrows. (B) EGF-induced dephosphorylation of Grb7 is blocked by the SHP inhibitor NSC-87877. (C) Silencing SHP-2 but not SHP-1 significantly inhibits EGF-induced dephosphorylation of Grb7. IB, immunoblot; IP, immunoprecipitation.