**SUPPLEMENTAL INFORMATION**

Identification of Lysophosphatidic Acid Receptor 1 in Astroglial Cells as a Target for Glial Cell Line-derived Neurotrophic Factor Expression Induced by Antidepressants

**Naoto Kajitani, Kanako Miyano, Mami Okada-Tsuchioka, Hiromi Abe, Kei Itagaki, Kazue Hisaoka-Nakashima, Norimitsu Morioka, Yasuhito Uezono, Minoru Takebayashi**

Running title: Antidepressants Activate Astrocytic LPAR1

To whom correspondence should be addressed: Minoru Takebayashi, MD, PhD. Department of Psychiatry, National Hospital Organization (NHO) Kure Medical Center and Chugoku Cancer Center, 3-1 Aoyama, Kure 737-0023, Japan. E-mail: mtakebayashi@kure-nh.go.jp, Tel: +81-823-22-3111, Fax: +81-823-21-0478

---

**Table of Contents**

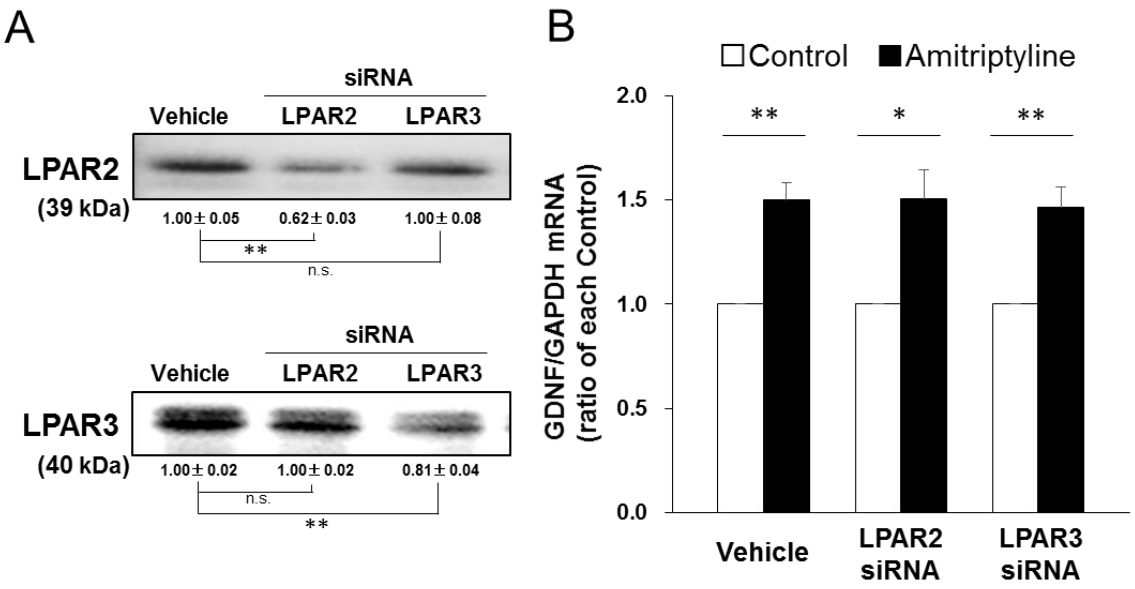


**FIGURE S1.** Lack of effect of knockdown of LPAR2/3 on amitriptyline-evoked GDNF mRNA expression in C6 cells. A, Effect of LPAR2/3 siRNA on LPARs protein levels. Cells were transfected with either vehicle, LPAR2, or LPAR3 siRNA for 48 h. LPAR2 and LPAR3 protein levels were quantified by immunoblotting. Immunoblots from a representative experiment are shown. The numbers under the immunoblots indicate mean±SEM relative-fold change in expression compared to vehicle. **p < 0.01; n.s.: not statistically significant. [Bonferroni's test; n = 5-6]. B, Effect of LPAR2/3 siRNA on amitriptyline-evoked GDNF mRNA expression. Cells were transfected with either vehicle, LPAR2, or LPAR3 siRNA for 48 h and subsequently treated with 25 μM amitriptyline for 3 h. *p < 0.05, **p < 0.01 [Student's *t*-test; n = 4-6]

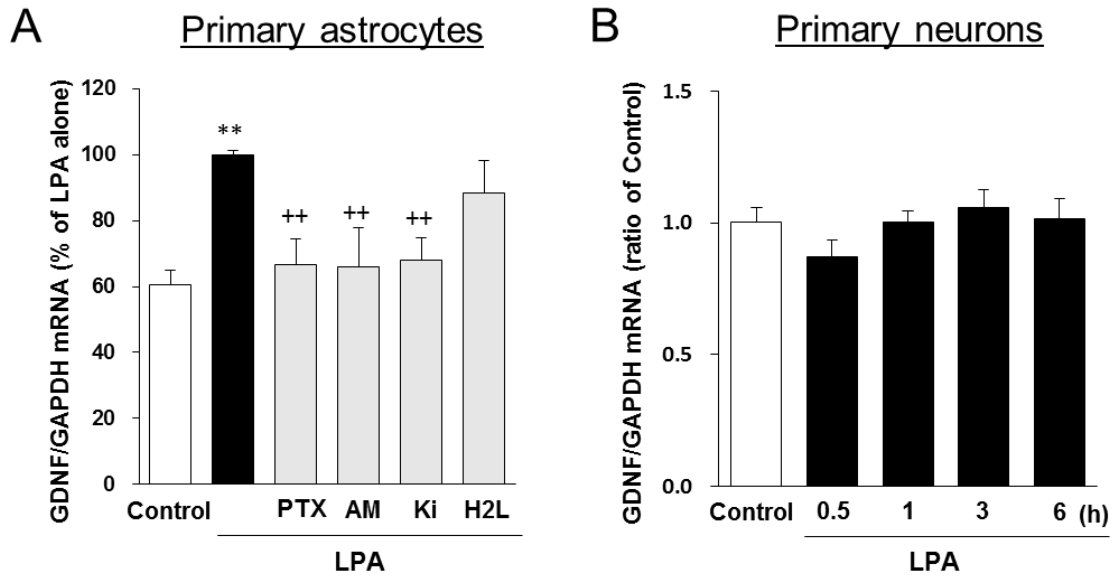


**FIGURE S2.** Effect of LPA on GDNF mRNA expression in primary cultured astrocytes and neurons. A, Effect of LPAR-related inhibitors on LPA-evoked GDNF mRNA expression in rat primary astrocytes. Cells were pretreated with either pertussis toxin (PTX) for 3h, or AM966 (AM), Ki16425 (Ki), or H2L5186303 (H2L) for 0.5 h and subsequently treated with 1 μM LPA for 3 h. **$p < 0.01$ versus control, and ++$p < 0.01$ versus LPA alone. [Bonferroni's test; n = 4-9]. B, Time-dependent effect of LPA on GDNF mRNA expression in rat primary neurons. Cells were treated with 1 μM LPA for the indicated period in hours (h).