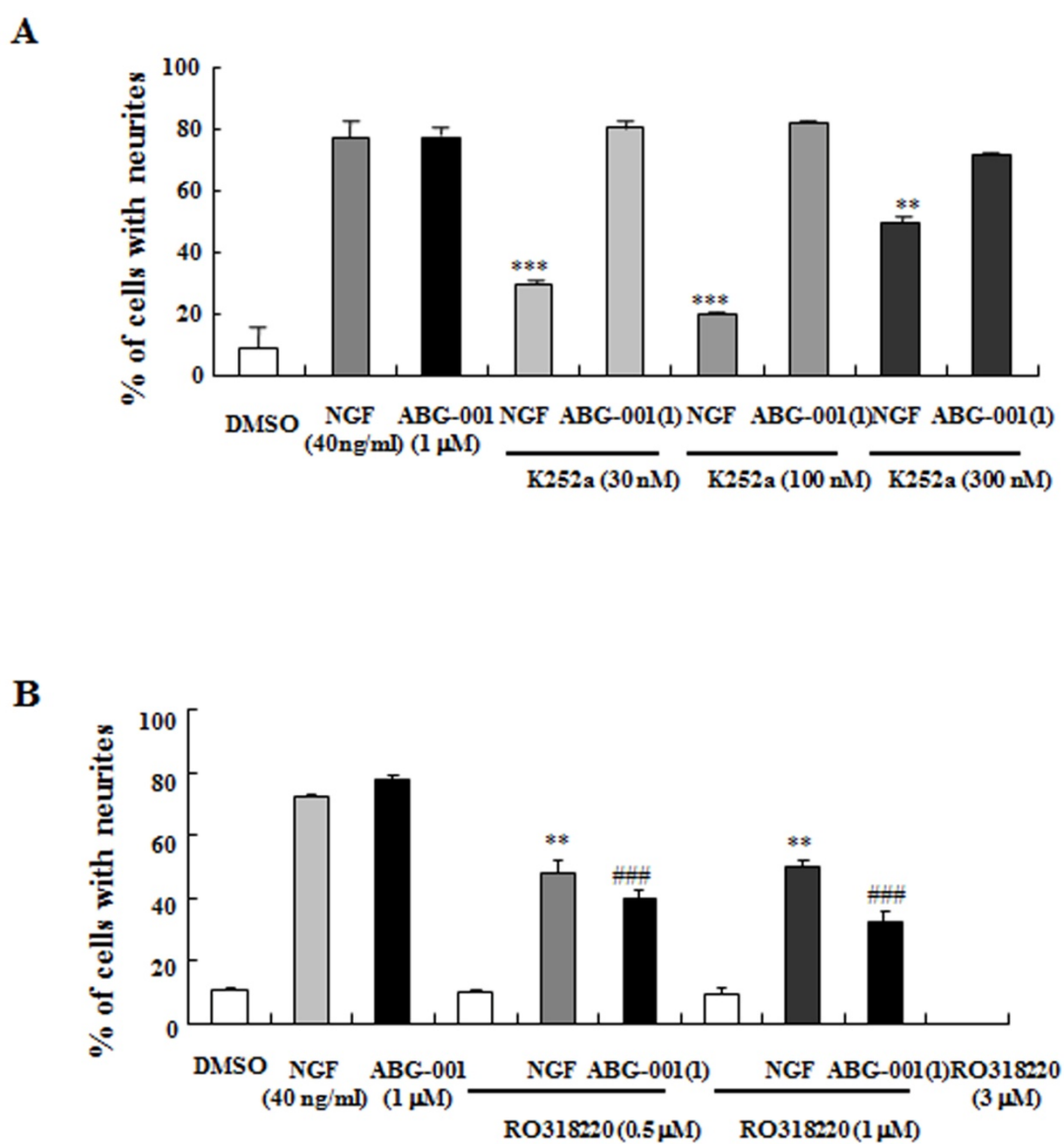


## Supplemental data

**Article title:** Neuritogenic activity of tetradecyl 2, 3-dihydroxybenzoate is mediated through the IGF-1 receptor/PI3K/MAPK signaling pathway

**Authors :** Ruiqi Tang, Lijuan Gao, Makoto Kawatani, Jianzhong Chen, Xueli Cao, Hiroyuki Osada, Lan Xiang and Jianhua Qi

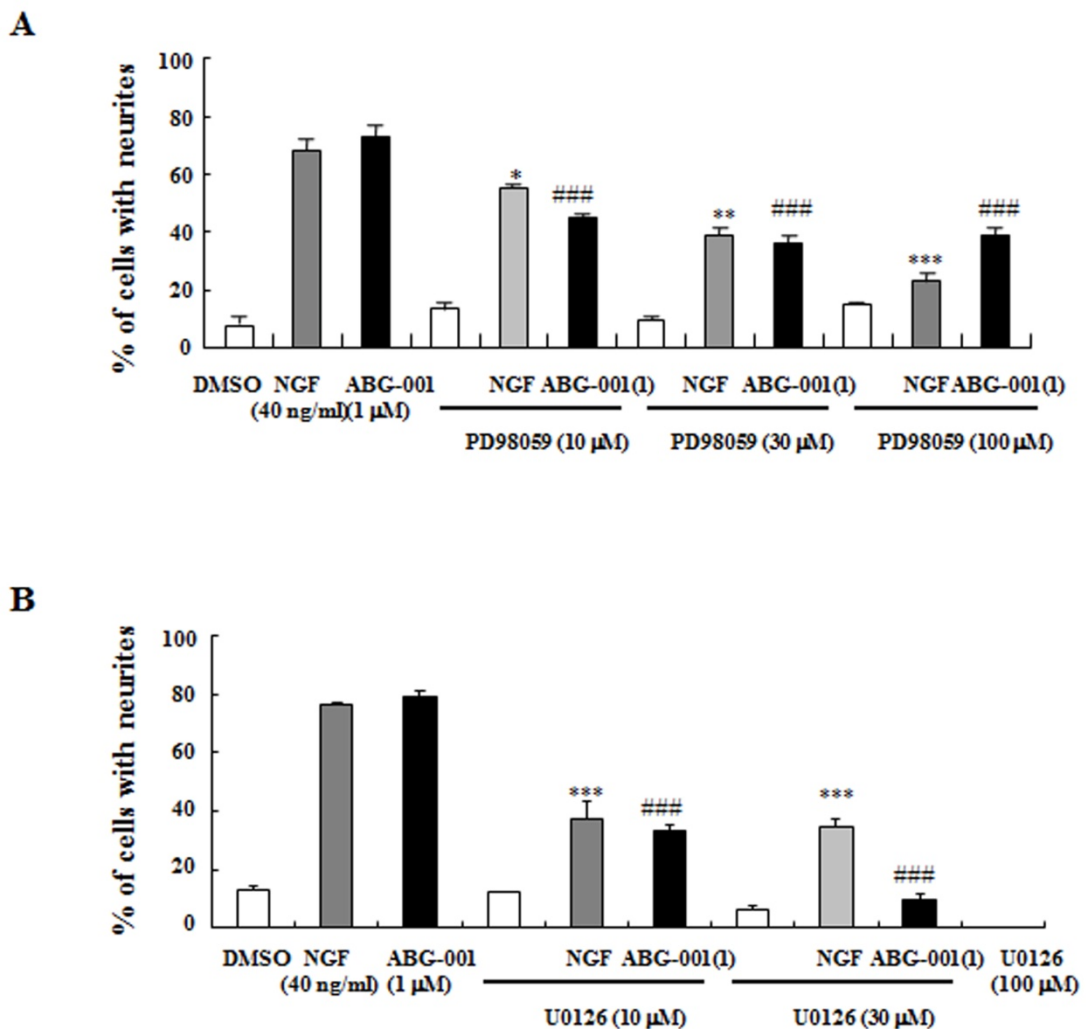
**Journal title:** Molecular Pharmacology



**Supplemental Figure 1**

**Supplemental Figure 1** Investigation of the dose-dependent effects of TrkA receptor

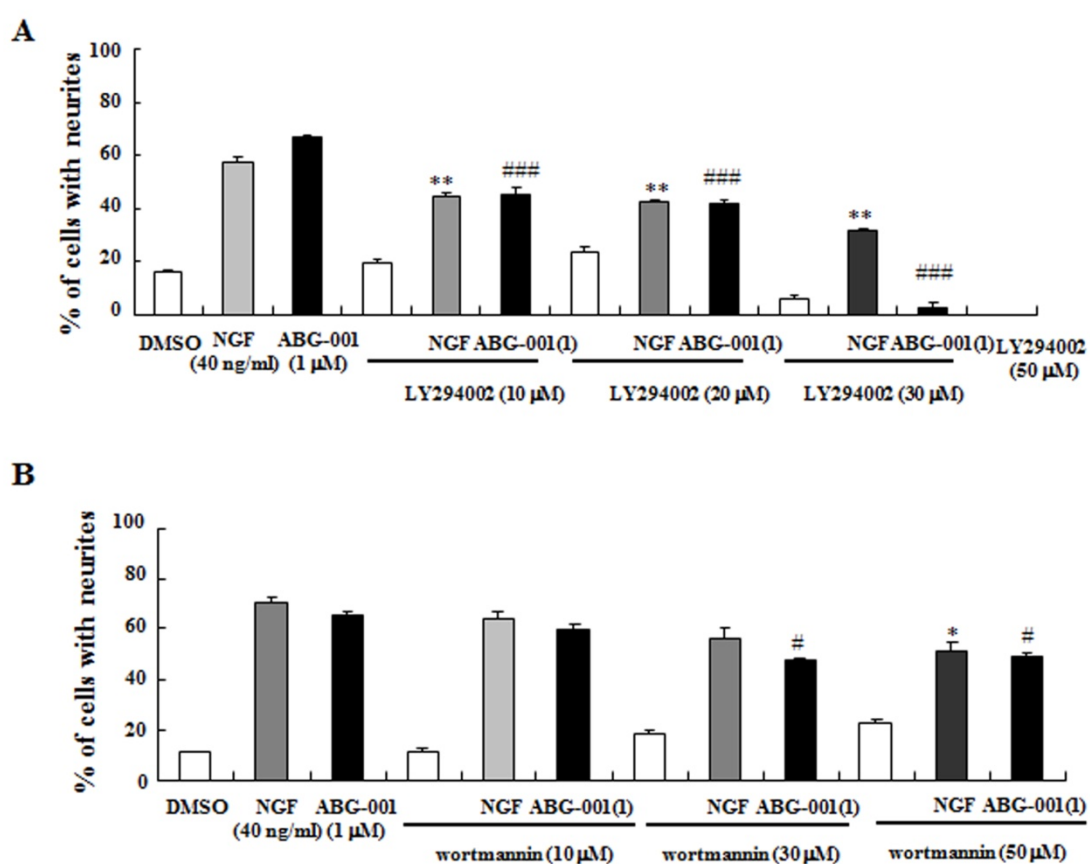
and PKC specific inhibitors. (A) K252a cannot block neurite outgrowth of PC12 cells induced by ABG-001. (B) RO318220 significantly reduced neurite outgrowth of PC12 cells induced by ABG-001. Cells were pretreated with 0.03, 0.1, and 0.3  $\mu\text{M}$  K252a; 0.5, 1, and 3  $\mu\text{M}$  RO318220 and subsequently treated with 1  $\mu\text{M}$  ABG-001. \*\*, \*\*\*Significantly different from the NGF-treated group at the same time point at  $P < 0.01$  or  $P < 0.001$ . ### Significantly different from the ABG-001-treated group at the same time point at  $P < 0.001$ .



**Supplemental Figure 2**

**Supplemental Figure 2** Investigation of the dose-dependent effects of MAPK/ERK

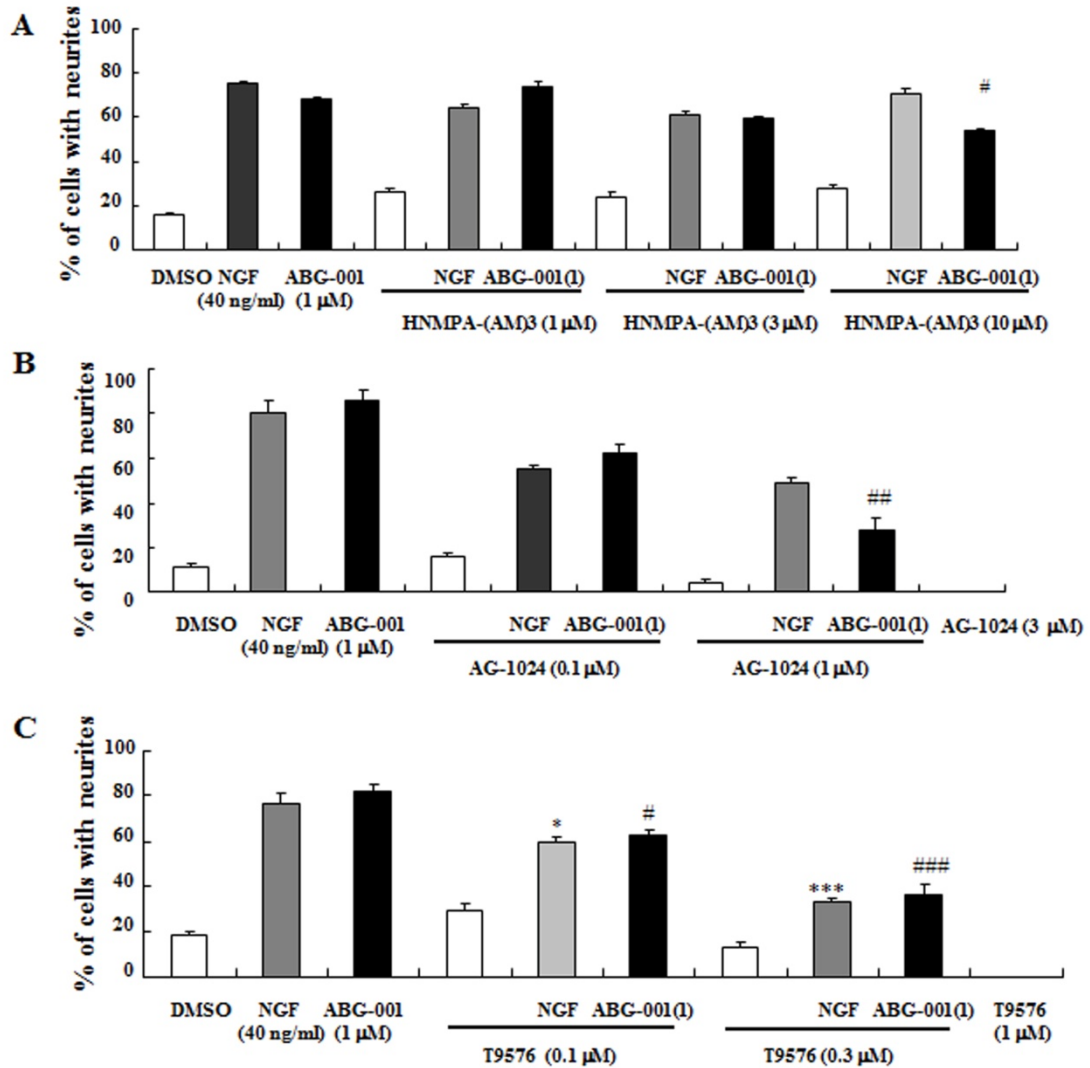
inhibitors PD98059 (A) and U0126 (B) on neurite outgrowth of PC12 cells induced by ABG-001. Cells were pretreated with 10, 30, or 100  $\mu$ M PD98059 or U0126 and subsequently treated with 1  $\mu$ M ABG-001. \*, \*\*, \*\*\* Significantly different from the NGF-treated group at the same time point at  $P < 0.05$ ,  $P < 0.01$  or  $P < 0.001$ . ### Significantly different from the ABG-001-treated group at the same time point at  $P < 0.001$ .



**Supplemental Figure 3**

**Supplemental Figure 3** Inhibitory effects of PI3K/AKT inhibitors LY294002 (A) and wortmannin (B) on neurite outgrowth of PC12 cells induced by ABG-001. Cells were pretreated with 10, 20, 30, and 50  $\mu$ M LY294002; 10, 30, and 50  $\mu$ M wortmannin and subsequently treated with 1  $\mu$ M ABG-001. \*, \*\* Significantly different from the

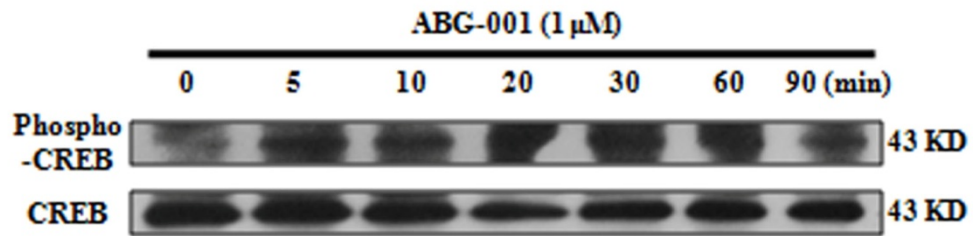
NGF-treated group at the same time point at  $P < 0.05$  or  $P < 0.01$ . #, ### Significantly different from the ABG-001-treated group at the same time point at  $P < 0.05$ ,  $P < 0.001$ .



**Supplemental Figure 4**

**Supplemental Figure 4** Inhibitory effects of insulin and IGF-1 receptor inhibitors HNMPA-(AM)3 (A), AG1024 (B), and T9576 (C) on neurite outgrowth of PC12 cells induced by ABG-001. Cells were pretreated with 1, 3, or 10 μM HNMPA-(AM)3; 0.1, 1, or 3 μM AG1024; or 0.1, 0.3, or 1 μM T9576 and subsequently treated with 1 μM ABG-001. \*, \*\*\* Significantly different from the NGF-treated group at the same time

point at  $P < 0.01$  or  $P < 0.001$ . #, ##, ### Significantly different from the ABG-001-treated group at the same time point at  $P < 0.05$ ,  $P < 0.01$  or  $P < 0.001$ .



**Supplemental Figure 5**

**Supplemental Figure 5** ABG-001 stimulated CREB phosphorylation at short time.