

## Supplementary Figure 2 $\,$ pH, $\,$ H $_2$ and $\,$ O $_2$ $\,$ maintain constant in culture medium in a closed flask filled with a mixed gas.

DMEM culture medium with dissolved  $H_2$  and  $O_2$  was prepared as described in **Methods**. PC12 cells (5 × 10<sup>5</sup>) were cultured in medium with or without antimycin A (10  $\mu$ g/ml) in a closed culture flask (25 cm<sup>2</sup>) filled with a mixed gas composed of 75% of  $H_2$ , 20% of  $O_2$  and 5% of  $CO_2$ . At the indicated time, pH,  $H_2$  or  $O_2$  in the medium was monitored with a pH meter,  $H_2$  or  $O_2$  electrode. One flask was used for one measurement. Data show the mean  $\pm$  SD (n = 4).