

**Figure 1.** A. Effect of NGDA (7H) (0.1  $\mu$ M) on baclofen (100  $\mu$ M)-induced Akt phosphorylation at 10 min. B. Effect of IGF-1R RNAi on baclofen (100  $\mu$ M)-induced Akt phosphorylation at 10 min. C. Effect of CGP54626 (10  $\mu$ M) on IGF-1 (10 ng/ml) -induced both IGF-1R and Akt phosphorylation at 10 min. D. Effect of CGP54626 on low K<sup>+</sup>-induced caspase-3 cleavage in presence of IGF-1 (10 ng/ml) from 2-12 hrs. All experiments have been performed in CGNs. The blots shown are representative of three separate experiments.

**Figure 2.** A. Effect of U73343 (5  $\mu$ M) on baclofen (100  $\mu$ M)-induced Src phosphorylation at 10 min. B. Effect of LY294002 (10  $\mu$ M) on baclofen (100  $\mu$ M)-induced both IGF-1R and Src phosphorylation at 10 min. All experiments have been done in CGNs. IGF-1R and Src phosphorylation was measured by quantifying pIGF-1R and pSrc from immunoblots respectively. \*\*\* P<0.001, versus basal levels. ns, non significance, versus treated with baclofen in the absence of antagonist. The blots shown are representative of three separate experiments.

**Figure 3.** A and B. Effect of different PKC inhibitor Gö 6983 (5 $\mu$ M) (A) and Gö6976 (5 $\mu$ M) (B) on Baclofen (100 $\mu$ M)-induced Akt and CREB phosphorylation at 10 min in CGNs. Akt and CREB phosphorylation was measured by quantifying pAkt and pCREB from immunoblots respectively. \*\*\* P<0.001; ns, non significance, versus treated with baclofen in the absence of inhibitors. The blots shown are representative of three separate experiments. C. Effect of PKC $\alpha$  and PKC $\beta$ II RNAi on baclofen (100 $\mu$ M)-induced Akt phosphorylation in MEF cells co-transfected with GABAB1 and GABAB2 at 5 min. The blots shown are representative of three separate experiments.

**Figure 4.** Densitometry for cleaved caspase-3 and PARP blots. A. Effect of baclofen (100  $\mu$ M) and CGP7930 (50  $\mu$ M) on caspase-3 activity from 6 to 12 hrs. B. Effect of baclofen (100  $\mu$ M) on PARP activity from 3 to 12 hrs. C, D, Effect of PTX (200 ng/ml) and LY294002 (10  $\mu$ M) on baclofen mediated caspase-3 activity from 6 to 12 hrs. E, Effect of AG1024 (0.1  $\mu$ M) on GABA (100  $\mu$ M), Baclofen (100  $\mu$ M) and CGP7930 (100  $\mu$ M) mediated caspase-3 activity from 6 to 12 hrs. Quantitative analysis were determined by the density of the cleaved caspase-3 or cleaved PARP bands and normalized by the ratio of density/the maximum density. Data are mean of S.E.M. from at least three independent experiments, \*\*\* P<0.001.