



Figure 7. *CaMKII α* is a novel regulator of *CaMKII β* . **A**, Schematic diagram of the *CaMKII α* /*CaMKII β* heterodimer with phosphorylation sites S262, S280, and S286 on *CaMKII α* and S311, S312, and S313 on *CaMKII β* . **B**, Hippocampal lysates were immunoblotted with anti-phospho-*CaMKII α* (pCaMKII α) and anti-phospho-*CaMKII β* (pCaMKII β). **C**, Hippocampal lysates were immunoblotted with anti-pCaMKII α and anti-pCaMKII β after 15 min of LTP. **D**, Hippocampal lysates were immunoblotted with anti-pCaMKII α and anti-pCaMKII β after 15 min of LTP in the presence of the *CaMKII* inhibitor KN-93. **E**, Hippocampal lysates were immunoblotted with anti-pCaMKII α and anti-pCaMKII β after 15 min of LTP in the presence of the *CaMKII* inhibitor KN-93 and the phosphatase inhibitor okadaic acid (OA).

phosphorylation of *CaMKII β* at S311, S312, and S313.

It is well established that *CaMKII α* and *CaMKII β* form a heterodimeric complex (Guzowski et al., 1999; Goshima et al., 2001). We have shown here that phosphorylation of *CaMKII α* at S262, S280, and S286 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII α* itself (Guzowski et al., 1999; Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Guzowski et al., 1999; Goshima et al., 2001). We have shown here that phosphorylation of *CaMKII α* at S262, S280, and S286 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII α* itself (Guzowski et al., 1999; Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Guzowski et al., 1999; Goshima et al., 2001).

We have shown here that phosphorylation of *CaMKII β* at S311, S312, and S313 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII β* itself (Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Goshima et al., 2001). We have shown here that phosphorylation of *CaMKII β* at S311, S312, and S313 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII β* itself (Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Goshima et al., 2001).

We have shown here that phosphorylation of *CaMKII α* at S262, S280, and S286 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII α* itself (Guzowski et al., 1999; Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Guzowski et al., 1999; Goshima et al., 2001). We have shown here that phosphorylation of *CaMKII α* at S262, S280, and S286 is essential for the formation of the *CaMKII α* /*CaMKII β* heterodimer. This phosphorylation is mediated by *CaMKII α* itself (Guzowski et al., 1999; Goshima et al., 2001) and is essential for the formation of the *CaMKII* heterodimeric complex (Guzowski et al., 1999; Goshima et al., 2001).