

Supplementary Information

**Enhanced Bioluminescent Sensor for Longitudinal Detecting of CREB
Activation in Living Cells**

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Japan

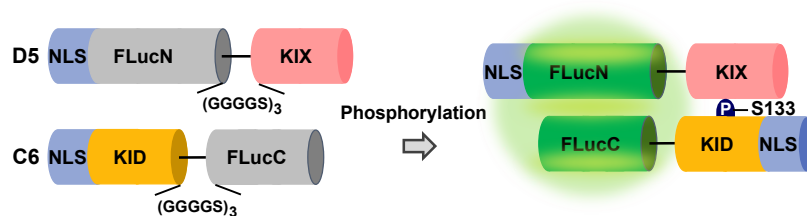


Figure S1. Schematic diagram of a pair of KID–KIX interaction probes to monitor CREB activation

The diagram shows previously reported KID–KIX interaction probes (D5 and C6). When CREB is phosphorylated at serine-133 within the kinase-inducible domain (KID) by kinases, KID–KIX interaction occurs, resulting in bioluminescence based on luciferase-fragment complementation in the presence of D-Luciferin: FLucN, N-terminal fragment of firefly luciferase; FLucC, C-terminal fragment of firefly luciferase; KIX, KID interaction domain of CBP; P, serine-133 phosphorylation; NLS, nuclear localization signal.

[Sensor_A]

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[Sensor_E]

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[Sensor_G (CREX)]

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ACCGGTCATCATCACCATCACCATTGA

GTTTAAAC

Supplementary Movie 1

Additional file: Time-lapse bioluminescence imaging of a CREX-expressing stable cell line under forskolin treatment in HEK293T cells

Time-lapse luminescence images were acquired over 4 h at 3-min exposures with 1-min intervals. Yellow square denotes the time of initiation of 50 μ M forskolin treatment.