

LightSwitch™ Promoter Reporter GoClone®

Catalog No: 32001 – Product IDs: S700001-S799999

Concentration: ~30 ng/μl

Quality: OD 260/280 ratio ≥ 1.75

Clone & Vector Information: The LightSwitch Promoter Reporter vector contains a ~1 kb human promoter sequence (–900 to +100 bp relative to the gene's transcription start site) cloned upstream of the RenSP luciferase gene in the pLightSwitch_Prom reporter vector. LightSwitch vector maps, annotations, and sequence & primer information are available at www.activemotif.com/ls-vectors. For sequence information for your promoter of interest, enter its Product ID in the Search box found at www.activemotif.com/ls-promoter.

LightSwitch Assays: Because all LightSwitch Reporter constructs utilize the RenSP luciferase reporter gene, you **MUST** use the LightSwitch Luciferase Assay Kit (Cat. Nos. 32031 & 32032) to perform luciferase assays with all LightSwitch vectors. This kit contains a proprietary substrate that was formulated specifically for use with our engineered RenSP gene. Other luciferase assay reagents are not compatible with RenSP. For more information, please go to www.activemotif.com/ls-assay.

Transfection Reagents: We recommend FuGENE® HD Transfection Reagent (Cat. Nos. 32042 & 32043) for all plasmid transfections because it has superior efficiency and low cytotoxicity across a wide variety of cell lines. If you are co-transfecting a plasmid with a short RNA (siRNA or miRNA), we recommend DharmaFECT® Duo (Cat. Nos. 32044 & 32045).

Positive & Negative Controls: We recommend that you include appropriate positive & negative control LightSwitch vectors when you perform your assays. We offer a panel of human housekeeping gene promoters as positive controls. In most cases, the ACTB Promoter Control (Cat. No. 32003) is a suitable positive control. Other housekeeping gene promoters are also available. The empty pLightSwitch_Prom reporter vector can be used to measure background signal. For additional negative controls, we offer negative control promoter vectors, which contain 1 kb non-conserved, non-genic, non-repetitive fragments from the human genome.

Single vs. Dual Assay Design: Modern transfection reagents and optimized luciferase assay reagents such as LightSwitch have largely eliminated the need to do a co-transfection control. In most cases, using a dual assay format provides little benefit, while increasing costs and reducing assay sensitivity. Unless you are using a hard-to-transfect cell line, we recommend testing the variation between transfection replicates in a single transfection format. If you wish to do a co-transfection, we offer the LightSwitch Dual Assay Kit (Cat. No. 32035), which has been optimized for use with all LightSwitch reporter vectors. For more information on the pros and cons of co-transfection, please download our Technical Note by entering www.activemotif.com/ls-co-trans into your browser.

