Product Specification Sheet

Product Name **pLenti-CMV-Nluc-MCS-EF1-Puro Lentiviral Vector**

Description

NanoLuc® luciferase is a small (19.1kDa), highly-stable enzyme derived from a deep-sea shrimp and engineered for optimal performance as a luminescent reporter. The enzyme is about 100-fold brighter than either firefly (*Photinus pyralis*) or *Renilla reniformis* luciferase using a novel substrate, furimazine, to produce high intensity, glow-type luminescence. The luminescent reaction is ATP-independent and designed to suppress background luminescence for maximal assay sensitivity. In addition to use as a traditional genetic reporter, the small size and extreme brightness of NanoLuc® luciferase make it an ideal protein fusion partner, expanding its utility to the study of live-cell protein dynamics.

Lentivirus vector based on the human immunodeficiency virus-1 (HIV-1) has become a promising vector for gene transfer studies. The advantageous feature of lentivirus vector is the ability of gene transfer and integration into dividing and nondividing cells. The pseudotyped envelope with vesicular stomatitis virus envelope G (VSV-G) protein broadens the target cell range. Lentiviral vectors have been shown to deliver genes to neurons, lymphocytes and macrophages, cell types that previous retrovirus vectors could not be used. Lentiviral vectors have also proven to be effective in transducing brain, liver, muscle, and retina in vivo without toxicity or immune responses. Recently, the lentivirus system is widely used to integrate siRNA efficiently in a wide variety of cell lines and primary cells both in vitro and in vivo. Lentivirus particles are produced from 293T cells through transient transfection of plasmids that encode for the components of the virion. Our third generation lentiviral systems have been designed for increased researcher safety.

pLenti-CMV-Nluc-MCS-EF1-Puro Lentiviral Reporter Vector contains the NLuc and MCS for cloning of fusion protein in frame with and at c-terminal of NLuc driven by CMV promoter and PURO driven by EF1α promoter. The EF1-PURO cassette permits puromycin selection.

Catalog Number LV1012

Size 10 µg at 0.5 µg/µL in TE

Shipping Room temperature

Storage and Stability Store at -20°C immediately upon receipt. This product is stable for 6 months when stored as directed.

ALSTEM, INC
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Quality Control	This plasmid is sequence verified.
Safety Precaution	Remember that you will be working with samples containing infectious virus. Follow the recommended NIH guidelines for all materials containing BSL-2 organisms. The ALSTEM Lentiviral Expression System is designed to minimize the chance of generating replication-competent lentivirus, but precautions should still be taken to avoid direct contact with viral supernatants.
Restricted Use	For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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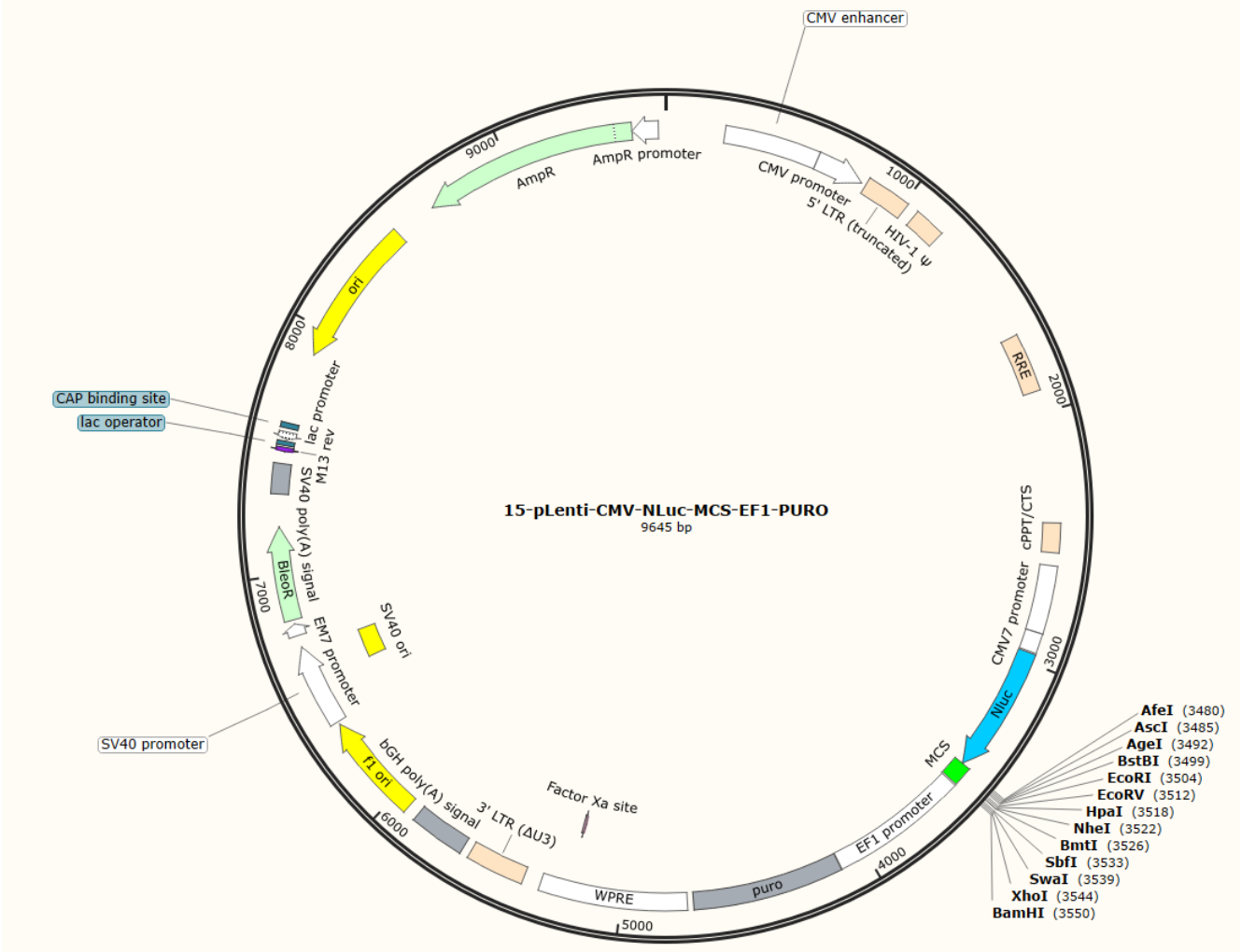
Vector Information

This is a lentiviral reporter vector that contains all the elements necessary for efficient and high yield viral production. A ubiquitous CMV promoter drives the expression of the NLuc-GOI fusion protein and EF1-PURO cassette allows for selection of transduced cells. This vector can be used for stable cell line generation.



*Note: Bacterial culture of pLenti vectors should be done in medium containing **10 µg/mL** Ampicillin. For maximal plasmid yield and quality, we recommend Stbl3 competent cells (Invitrogen).*

IMPORTANT NOTICE

Store the vial at -20°C immediately upon receipt.

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