



### Highly sensitive and precise in vivo luminescence imaging

**AMSBIO** announce a new range of **pre-made Nano-Lantern lentivirus products** that utilize a proprietary lentiviral vector system to enable **highly sensitive and precise in vivo luminescence imaging**.

**This cutting-edge Nano-Lantern lentivirus technology**, which consists of an enhanced Renilla-Luciferase connected to an Orange Fluorescent protein (OFP), represents a significant improvement over previous methods and is poised to revolutionize many in vivo imaging applications.



**Image caption:** pre-made Nano-Lantern lentivirus products  
(courtesy: AMSBIO)

### Fluorescent markers and bioluminescence

are widely used techniques for in vivo imaging in living cells. While fluorescence imaging is an extremely useful tool, it requires external excitation from laser light. Common drawbacks of using laser light excitation include autofluorescence, phototoxicity, and photobleaching. By comparison, bioluminescence imaging does not require light activation but gives low brightness emissions and typically requires prolonged exposure times, making it difficult to observe small, rapidly moving structures.

### The new lentivirus products,

introduced by AMSBIO, are based upon a novel bioluminescence imaging method called Nano-Lantern which uses a bioluminescence resonance energy transfer (BRET) approach to significantly enhance signal intensity.

### Beneficially, Nano-Lantern bioluminescence imaging

also has an extremely low-level background signal, making it more sensitive and quantitative. When linked to a targeting protein, Nano-Lantern lentivirus products emit light in response to specific biological activity enabling dynamic real-time visualization in living organisms. Combining dynamic visualization with enhanced signal intensity and low background noise - Nano-Lantern lentivirus has been demonstrated to provide bright and high-resolution imaging of small, rapidly moving sub cellular structures.

### For further information

please visit <https://www.amsbio.com/nano-lantern-luminescence-imaging/> or contact AMSBIO on +31-72-8080244 / +44-1235-828200 / +1-617-945-5033 / [info@amsbio.com](mailto:info@amsbio.com).

### AMS Biotechnology (AMSBIO)

Founded in 1987, is recognized today as a leading transatlantic company contributing to the acceleration of discovery through the provision of cutting-edge life science technology, products, and services for R&D in the medical, nutrition, cosmetics, and energy industries. AMSBIO has in-



depth expertise in extracellular matrices to provide elegant solutions for studying cell motility, migration, invasion, and proliferation. This expertise in cell culture and the ECM allows AMSBIO to partner with clients in tailoring cell systems to enhance organoid and spheroid screening outcomes using a variety of 3D culture systems, including organ-on-a-chip microfluidics. For drug discovery research, AMSBIO offers assays, recombinant proteins, and cell lines. Drawing upon a huge and comprehensive biorepository, AMSBIO is widely recognized as a leading provider of high-quality tissue specimens (including custom procurement) from both human and animal tissues. The company provides unique clinical grade products for stem cells and cell therapy applications. This includes GMP cryopreservation technology, and high-quality solutions for viral delivery.

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