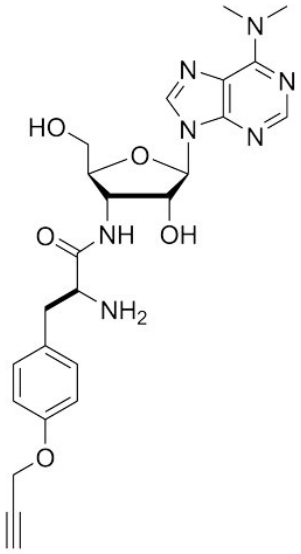
www.vectorlabs.com
Email: customerservice@vectorlabs.com
Telephone: (650) 697-3600

CLICK-&-GO® PLUS 647 OPP PROTEIN SYNTHESIS ASSAY KIT

SKU: CCT-1496



DESCRIPTION

Synthesis of many proteins is tightly controlled at the level of translation, and plays an essential role in fundamental processes such as cell growth and proliferation, signaling, differentiation, or death. Methods that allow imaging and identification of nascent proteins are critical for dissecting regulation of translation, both spatially and temporally, particularly in whole organisms. Although protein synthesis is a conserved and essential cellular function, it is often regulated in a cell-type-specific manner to influence cell fate, growth and homeostasis. Most methods used to measure protein synthesis depend on metabolically labeling large numbers of cells with radiolabeled amino acids, stable isotope-labeled amino acids, bioorthogonal noncanonical amino acid tagging (L-azidohomoalanine or homopropargylglycine or their combination). Because these methods typically depend on specialized growth conditions, they

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have been largely restricted to yeast, bacteria and cell lines. Application of these techniques for investigating protein synthesis within mammalian systems *in vivo* has been challenging.

The use of O-propargyl-puromycin (OPP), an analog of puromycin that contains a terminal alkyne group, has facilitated the quantification of protein synthesis within individual cells in vivo. OPP enters the acceptor site of ribosomes and incorporates into nascent polypeptide chains. Unlike traditional methods mentioned above, OPP is not an amino acid analog; thus, OPP can be added directly to cells in complete media (i.e., methionine-containing) or used to detect *in vivo* protein synthesis. It also can be used with cell lines that are sensitive to media exchanges or incubation in methionine-free media. The combination of high cell permeability and signal-to-noise ratio makes OPP an ideal candidate compound to study nascent proteomes across a wide array of cellular types and conditions. The kit contains all of the components needed to detect incorporated OPP with far-red-fluorescent AZDye 647 Azide Plus (Alexa Fluor® 647 equivalent), and blue-fluorescent Hoechst 33342 dye for nuclear staining. A sufficient amount of reagents is provided for imaging 25 coverslips or 250 wells using 96-well plates.

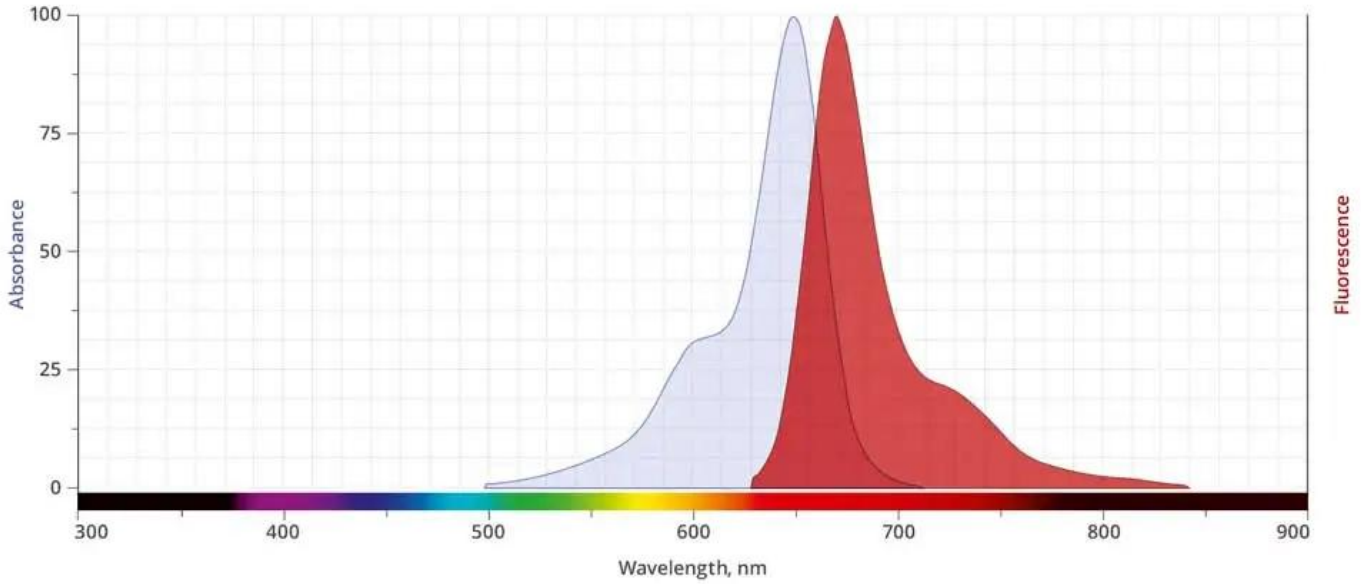
SPECIFICATIONS

Unit Size	1 Kit
Storage Instructions	4C
Excitation/Emission Maximum	648/671 nm
Label	AZDye 647 Azide Plus
Number of Reactions	25
Shipping Instructions	Ambient temperature

ABS/EM SPECTRA

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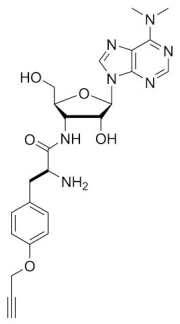
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DOCUMENTS

- Safety Data Sheet
- User Guide
- Datasheet

GALLERY IMAGES



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