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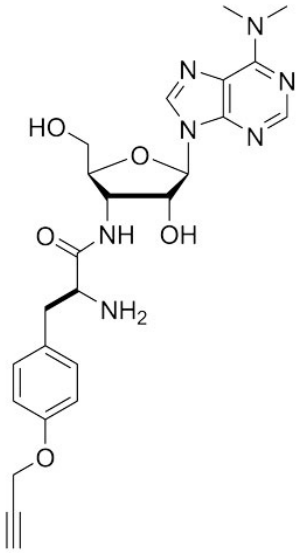
CLICK-&-GO® PLUS 405 OPP

SKU: CCT-1492



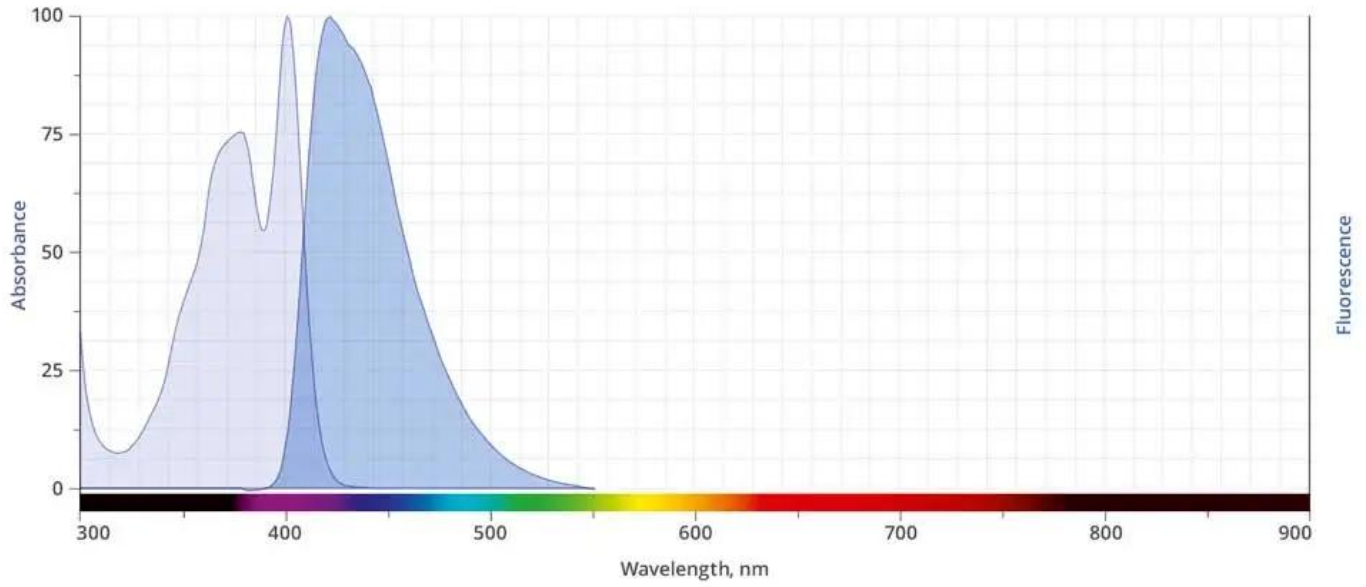
Description

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 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 blue-fluorescent AZDye 405 Azide Plus (Alexa Fluor® 405 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.

Abs/Em Spectra



Specifications

Unit Size	1 kit
Label	AZDye 405 Azide Plus
Abs/Em Maxima	402/421 nm
Number of Reactions	25
Storage Conditions	4C
Shipping Conditions	Ambient temperature

For research use only. Not intended for animal or human therapeutic or diagnostic use.