TriLink BIOTECHNOLOGIES

part of Maravai LifeSciences

CleanCap™ Cyanine 5 EGFP mRNA(5moU)

Cyanine 5 Enhanced Green Fluorescent Protein mRNA (5-methoxyuridine)

Catalog # L-7701

Cyanine 5 EGFP mRNA is designed for the analysis of mRNA delivery and translation efficiency. The EGFP mRNA will express an enhanced version of the green fluorescent protein, originally isolated from the jellyfish, *Aequorea victoria*. EGFP is a commonly used direct detection reporter in mammalian cell culture, yielding bright green fluorescence with an emission peak at 509 nm. When labeled with cyanine 5, EGFP mRNA can be directly visualized. Cyanine 5 EGFP mRNA is an ideal molecule to determine mRNA delivery and localization independent of translation.

Cyanine 5 is a synthetic fluorescent dye with maximum excitation and emission wavelengths of 650 nm and 670 nm respectively. TriLink's CleanCap Cyanine 5 EGFP mRNA is transcribed with Cyanine 5-UTP:5-Methoxy-UTP at a ratio of 1:3. Substitution in this ratio results in mRNA that is easily visualized and can still be translated in cell culture. Translation efficiency correlates inversely with Cyanine 5-UTP substitution.

L-7701-100 (100 µgrams[1])
L-7701-1000 (1 mg)
L-7701-BK (Bulk amount)

1.0 mg/mL in 1 mM Sodium Citrate, pH 6.4
mRNA Length: 996 nucleotides

Store at or below -40°C

QC Analysis

Identity and Purity
Agarose Gel Mobility; Pass
Concentration: ± 6%; Pass

Product released by Quality Assurance

[1]A standard conversion factor of 40 µg/OD_{260} was used to calculate quantity.

Product Details

This mRNA is capped using CleanCap™, TriLink's proprietary co-transciptional capping method, which results in the naturally occuring Cap 1 structure with high capping efficiency. It is polyadenylated, modified with 5-methoxyuridine and optimized for mammalian systems. It mimics a fully processed mature mRNA.

Handling

Store at or below -40°C. Thaw and work with mRNA on ice. Upon first use, pulse spin before opening and aliquot into single use portions. Do not vortex. Use only certified RNase-free reagents and consumables with proper RNase-free technique. Use of barrier tips is recommended. Avoid freeze/thaw cycles. Do not mix with media containing serum unless first complexed with a stabilizing transfection reagent.

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Title	Publication/ Patent Number	Serial Number	Filing Date	Country
FACS-Optimized Green Fluorescent Protein Mutants with Different Excitation Wavelengths	Expired	60/008,232	6-Dec-95	United States
FACS-Optimized Green Fluorescent Protein Mutants with Different Excitation Wavelengths	5,968,738	08/761,771	6-Dec-96	United States
FACS-Optimized Mutants of the Green Fluorescent Protein (GFP)	Expired	60/010,960	1-Feb-96	United States
FACS-Optimized Mutants of the Green Fluorescent Protein (GFP)	5,804,387	08/791,332	31-Jan-97	United States
Fluorescence-Based Isolation of Differentially Induced Genes	5,994,077	08/926,556	10-Sep-97	United States
FACS-Optimized Mutants of the Green Fluorescent Protein (GFP)	6,090,919	09/135,418	17-Aug-98	United States
Modified Green Fluorescent Proteins	5,625,048	08/337,915	10-Nov-94	United States
Modified Green Fluorescent Proteins	6,319,669	08/727,452	20-Mar-97	United States
Modified Green Fluorescent Proteins	6,066,476	08/753,144	20-Nov-96	United States
Modified Green Fluorescent Proteins	5,777,079	08/753,143	20-Nov-96	United States
Modified Green Fluorescent Proteins	6,800,733	10/024,686	17-Dec-01	United States
Modified Green Fluorescent Proteins	3283523	08-520626	13-Nov-95	Japan
Modified Green Fluorescent Proteins	702205	41550/96	13-Nov-95	Australia
Modified Green Fluorescent Proteins	2,205,006	2,205,006	13-Nov-95	Canada
Modified Green Fluorescent Proteins	2,343,586	2,343,586	13-Nov-95	Canada
Modified Green Fluorescent Proteins	804457	95939898.3	13-Nov-95	Europe - including corresponding patents in AT, BE, CH, DE, DK, ES, FR, GR, IE, IT, LI, LU, MC, NL, PT, SE, GB
Modified Green Fluorescent Proteins	1104769 (pending)	1105011.9	13-Nov-95	Europe
Modified Green Fluorescent Proteins	295 22 103 (Utility Model)	9522103	13-Nov-95	Germany
Long Wavelength Engineered Fluorescent Proteins	6,124,128	08/706,408	30-Aug-96	United States
Long Wavelength Engineered Fluorescent Proteins	6,054,321	08/911,825	15-Aug-97	United States
Long Wavelength Engineered Fluorescent Proteins	6,077,707	08/974,737	19-Nov-97	United States
Long Wavelength Engineered Fluorescent Proteins	6,403,374	09/465,142	16-Dec-99	United States
Long Wavelength Engineered Fluorescent Proteins	6,593,135	09/575,847	19-May-00	United States
Long Wavelength Engineered Fluorescent Proteins	6,780,975	10/071,976	5-Feb-02	United States
Long Wavelength Engineered Fluorescent Proteins	7,544,776	10/620,099	14-Jul-03	United States
Long Wavelength Engineered Fluorescent Proteins	7,560,287	10/924,232	23-Aug-04	United States
Long Wavelength Engineered Fluorescent Proteins	pending	13/011,432	21-Jan-11	United States
Long Wavelength Engineered Fluorescent Proteins	4322992	10-510109	15-Aug-97	Japan
Long Wavelength Engineered Fluorescent Proteins	4427222	2001-586334	17-May-01	Japan
Long Wavelength Engineered Fluorescent Proteins	727088	43277/97	15-Aug-97	Australia
Long Wavelength Engineered Fluorescent Proteins	767375	23196/01	15-Aug-97	Australia
Long Wavelength Engineered Fluorescent Proteins	2,232,242	2,232,242	15-Aug-97	Canada
Long Wavelength Engineered Fluorescent Proteins	2408302 (pending)	2,408,302	17-May-01	Canada
Long Wavelength Engineered Fluorescent Proteins	886644	97941350.7	15-Aug-97	Europe - including corresponding patents in CH, DE, DK, ES, FR, IE, IT, LI, NL, SE, GB
Long Wavelength Engineered Fluorescent Proteins	1285065	20010937550	17-May-01	Europe - including corresponding patents in CH, DE, DK, ES, FR, IE, IT, LI, NL, SE, GB
Long Wavelength Engineered Fluorescent Proteins	Granted	982972	15-Aug-97	Mexico
Fluorescent Proteins	6,919,186	09/967,301	28-Sep-01	United States
Fluorescent Proteins	7,091,317	10/757,624	14-Jan-04	United States
Fluorescent Proteins and methods of using same	7,300,762	11/251,209	14-Oct-05	United States
Mutants of Green Fluorescent Protein	EP1381625	EP01972260.2	28-Sep-01	Europe (BE, CH, DE, ES, FR, IT, LI, NL, SE)
Mutants of Green Fluorescent Protein	2,445,035	2,445,035	28-Sep-01	Canada
Mutants of Green Fluorescent Protein	2001292040	2001292040	28-Sep-01	Australia
Mutants of Green Fluorescent Protein	WO 02/085936	PCT/01GB/04363	28-Sep-01	PCT
Novel Fluorescent Proteins	6,172,188	08/819,612	31-Jan-96	United States
Novel Fluorescent Proteins	6,818,443	09/872,364	1-Jun-01	United States
Novel Fluorescent Proteins	7,314,915	10/947,178	23-Sep-04	United States
Novel Variants of Green Fluorescent Protein, GFP	2,232,727	2,232,727	31-Jan-96	Canada
Novel Variants of Green Fluorescent Protein, GFP	EP0851874	96900890.3	31-Jan-96	Europe (BE, CH, DE, DK, ES, FR, GB, IE, IT, LI, NL, SE)
Novel Variants of Green Fluorescent Protein, GFP	WO 97/11094	PCT/1996DK/00051	31-Jan-96	PCT
Novel Fluorescent Proteins	7,001,986	09/887,784	19-Jun-01	United States
Nucleic Acids Encoding Fluorescent Proteins and Methods of Using the Same	7,476,518	11/206,904	19-Aug-05	United States
Fluorescent Proteins	2001279669	2001279669	18-Jun-01	Australia
Fluorescent Proteins	2,410,413	2,410,413	18-Jun-01	Canada
Fluorescent Proteins	EP1299414	1957861.6	18-Jun-01	Europe (BE, CH, CY, DE, DK, ES, FR, GB, IE, IT, LI, LU, MC, NL, SE, TR)
Novel Fluorescent Proteins	4459944	2006-304095	9-Nov-06	Japan
Novel Fluorescent Proteins	WO 01/98338	PCT/2001EP/06848	18-Jun-01	PCT