For Research Use Only.
Not for use in diagnostic procedures.

Amalgaam MBL

Fluorescent Protein Expression Plasmid

***CoralHue*®**

Nucleoplasm-targeted Azami-Green (pNP-AG)

Code No.	Quantity
AM-V0214M	20 µg

BACKGROUND: This plasmid is designed for expression of Nucleoplasm-targeted ***CoralHue***® Azami Green (NP-AG) in mammalian cells. ***CoralHue***® Azami Green (AG), which was originally cloned from the stony coral whose Japanese name is "Azami-Sango", absorbs light maximally at 492 nm and emits green light at 505 nm. ***CoralHue***® AG rapidly matures to form a tetrameric complex. Targeting of AG to the Nucleoplasm is achieved with the signal peptide fused to the C-terminus of AG.

SOURCE: The ***CoralHue***® AG gene was originally cloned from the stony coral "Azami-Sango (*Galaxea fascicularis*)."

FORMULATION: Dry form.
Reconstitute with distilled water or TE before use.

PURITY: A260/A280 > 1.5

STORAGE: Store at -20°C

SEQUENCE LANDMARKS (bases):
CoralHue® NP-AG (Including Stop Codon): bases 1-750
CMV promoter: bases 4093-4665
SV40 polyA: bases 903-937
Kanamycin/Neomycin resistance gene: bases 1980-2771
pUC origin: bases 3359-4002
f1 origin: bases 1000-1455
SV40 origin: bases 1796-1931

INTENDED USE:
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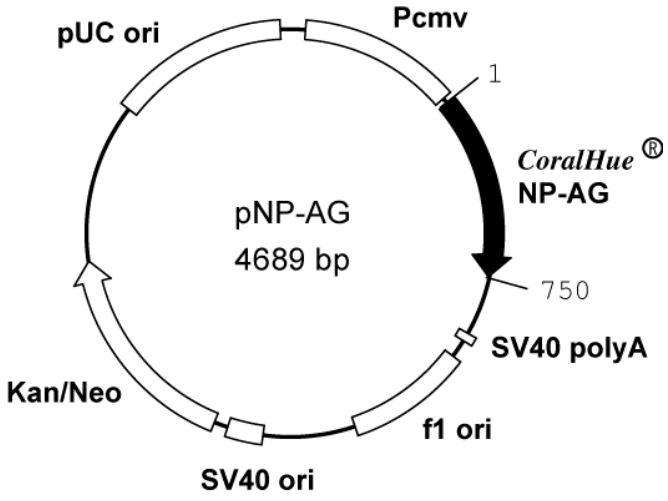
REFERENCE:
Karasawa, S., *et al*. *J. Biol. Chem.* **278,** 34167-71 (2003)

GenBank:
Accession Numbers: AB107915, AB108447

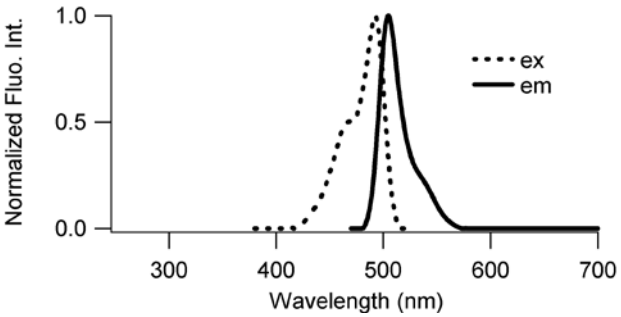
RELATED PRODUCTS:
AM-V0201M ***CoralHue***® Mitochondria-targeted monomeric Azami-Green 1 (pMT-mAG1)
AM-V0202M ***CoralHue***® ER-targeted monomeric Azami -Green 1 (pER-mAG1)
AM-V0203M ***CoralHue***® Plasma Membrane-targeted monomeric Azami-Green 1 (pPM-mAG1)
AM-V0205M ***CoralHue***® β-Actin-targeted monomeric Azami -Green 1 (pPM-mAG1)

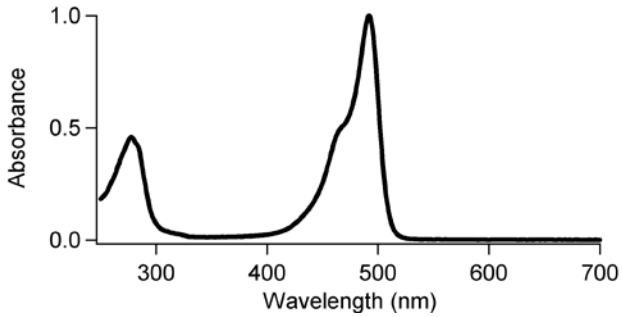


Amalgaam MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
URL: http://ruo.mbl.co.jp Email:support@mbl.co.jp Phone: (052) 238-1904

***CoralHue*® AG:** 226 amino acids (without NP signal sequence)

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
AG	492/505	72,300 (492 nm)	0.67	p*K* a<5.0





CoralHue® NP-AG

1) DNA sequence

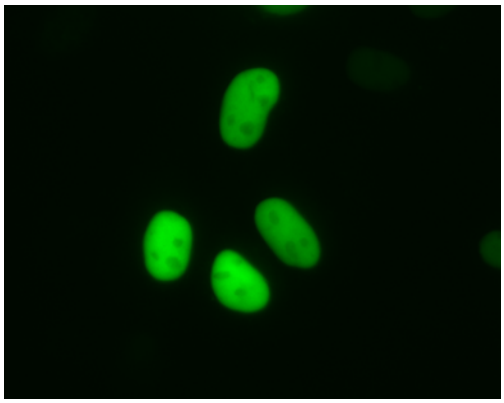
ATGGTGAGTGTGATTAAACCAGAGATGAAGATCAAGCTGTGTAT
GAGAGGCACTGTAAACGGGCATAATTTCGTGATTGAAGGAGAAG
GAAAAGGAAATCCTTACGAGGGAACGCAGATTTTAGACCTGAAC
GTCACTGAAGGCGCACCTCTGCCTTTCGCTTACGATATCTTGAC
AACAGTGTTCCAGTACGGCAACAGGGCATTCACCAAGTACCCAG
CAGATATTCAGGACTATTTCAAGCAGACTTTTCCTGAGGGGTAT
CACTGGGAAAGAAGCATGACTTATGAAGACCAGGGCATTTGCAC
CGCCACAAGCAACATAAGCATGAGGGGCGACTGTTTTTTCTATG
ACATTCGTTTTGATGGTGTGAACTTTCCTCCCAATGGTCCGGTT
ATGCAGAAGAAGACTCTTAAATGGGAGCCATCCACTGAGAAAAT
GTACGTACGTGATGGAGTGCTGAAGGGTGATGTTAACATGGCTC
TGTTGCTTGAAGGAGGTGGCCATTATCGATGTGATTTCAAAACT
ACTTACAAAGCAAAGAAGGATGTCCGTTTGCCAGACTATCACTT
TGTGGACCACCGCATTGAGATTTTGAAGCATGACAAAGATTACA
ACAAGGTCAAGCTCTATGAGAATGCCGTTGCTCGCTATTCTATG
CTGCCGAGTCAGGCCAAGGGATCCGGTGATGAAGTCGAAGGAGT
GGAAGAAGTAGCTAAGAAGAAGAGTAAAAAGGAAAAGGATAAA

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)

2) Amino acid sequence

MVSVIKPEMKIKLCMRGTVNGHNFVIEGEGKGNPYEGTQILDLN
VTEGAPLPFAYDILTTVFQYGNRAFTKYPADIQDYFKQTFPEGY
HWERSMTYEDQGICTATSNISMRGDCFFYDIRFDGVNFPPNGPV
MQKKTLKWEPSTEKMYVRDGVLKGDVNMALLLEGGGHYRCDFKT
TYKAKKDVRLPDYHFVDHRIEILKHDKDYNKVKLYENAVARYSM
LPSQAKGSGDEVEGVEEVAKKKSKKEKDK

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)



***CoralHue*® NP-targeted AG expression in HeLa cells.**

***CoralHue*® AG** is a product of co-development with Dr. Atsushi Miyawaki at the Laboratory for Cell Function and Dynamics, the Brain Science Institute, and the Institute of Physical and Chemical Research (RIKEN).

Patent Nos. JP4214209, US7247449 and EP1452591.