

Fluorescent Protein Expression Plasmid

CoralHue[®]

Plasma Membrane-targeted monomeric Azami-Green 1 (pPM-mAG1)

Code No.
AM-V0203M

Quantity
20 µg

BACKGROUND: This plasmid is designed for expression of plasma membrane-targeted *CoralHue*[®] monomeric Azami Green 1 (PM-mAG1) 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. Wild-type *CoralHue*[®] AG rapidly matures to form a tetrameric complex. *CoralHue*[®] AG has been carefully engineered to form a monomer, *CoralHue*[®] monomeric Azami Green 1 (mAG1) that maintains the brightness and pH stability of the parent protein. Targeting of mAG1 to the plasma membrane is achieved with the signal peptide fused to the N-terminus of mAG1.

SOURCE: The *CoralHue*[®] AG gene was cloned from 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[®] PM-mAG1 (Including Stop Codon):
bases 1-744
CMV Promoter: bases 4087-4659
SV40 poly A: bases 897-931
Kanamycin/Neomycin resistance gene: bases 1974-2765
pUC Origin: bases 3353-3996
f1 Origin: bases 994-1449
SV40 Origin: bases 1790-1925

INTENDED USE:

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

REFERENCE:

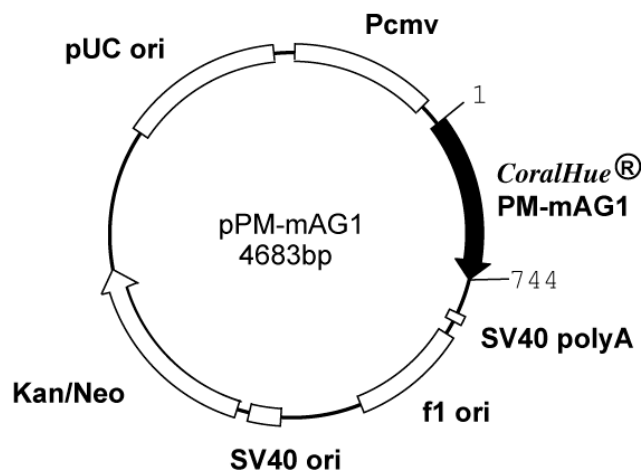
Karasawa, S., *et al.*, *J. Biol. Chem.* **278**, 34167-71 (2003)

GenBank:

Accession Numbers: AB107915, AB108447

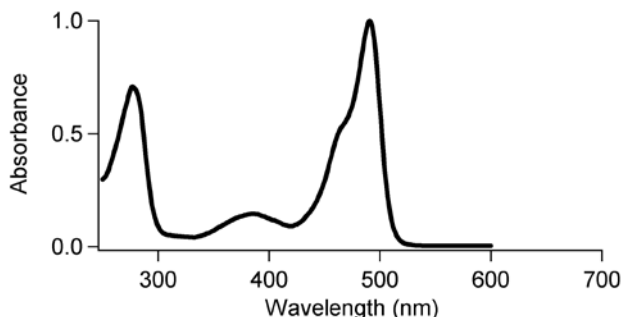
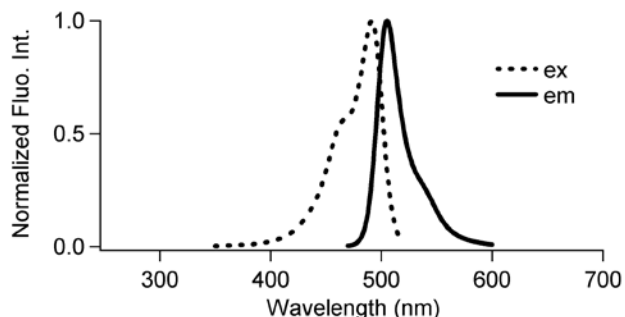
RELATED PRODUCTS:

- AM-V0201M *CoralHue*[®] Mitochondria-targeted monomeric Azami-Green 1 (pMT-mAG1)
- AM-V0202M *CoralHue*[®] ER-targeted monomeric Azami-Green 1 (pER-mAG1)
- AM-V0205M *CoralHue*[®] β-Actin-targeted monomeric Azami-Green 1 (pPM-mAG1)
- AM-V0214M *CoralHue*[®] Nucleoplasm-targeted Azami-Green (pNP-AG)



CoralHue[®] mAG1: 226 amino acids (without PM signal sequence)

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M ⁻¹ cm ⁻¹)	Fluorescence Quantum Yield	pH sensitivity
mAG1	492/505	55,500 (492 nm)	0.74	pK _a =5.8



CoralHue[®] PM-mAG1

1) DNA sequence

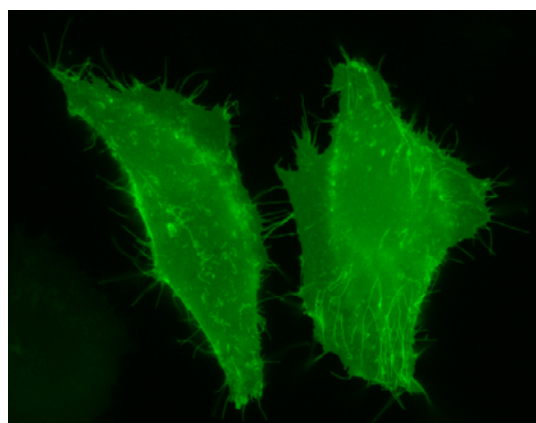
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CGGCGTGGACATGGATCCCATGGTGAGTGTGATTAACCAGAGA
TGAAGATCAAGCTGTGTATGAGAGGCACTGTAACGGGCATAAT
TTCGTGATTGAAGGAGAAGGAAAAGGAAATCCTTACGAGGGAAC
GCAGATTTTAGACCTGAACGTCACTGAAGGCGCACCTCTGCCTT
TCGCTTACGATATCTTGACAACAGTGTCCAGTACGGCAACAGG
GCATTCACCAAGTACCCAGCAGATATTCAGGACTATTTCAAGCA
GACTTTTCTGAGGGGTATCACTGGGAAAGAAGCATGACTTATG
AAGACCAGGGCATTTCACCCGCCACAAGCAACATAAGCATGAGG
GGCGACTGTTTTTCTATGACATTCGTTTTGATGGCACCACCTT
TCCTCCCAATGGTCCGGTTATGCAGAAGAAGACTCTTAAATGGG
AGCCATCCACTGAGAAAATGTACGTAGAGGATGGAGTGCTGAAG
GGTGATGTTAACATGCGCCTGTTGCTTGAAGGAGGTGGCCATTA
TCGATGTGATTTCAAACACTTACAAAGCAAAGAAGGAGGTCC
GTTTGCCAGACGCGCACAAAATTGACCACCGCATTGAGATTTTG
AAGCATGACAAAGATTACAACAAGGTCAAGCTCTATGAGAATGC
CGTTGCTCGCTATTCTATGCTGCCGAGTCAGGCCAAG

(Underlined sequences in red are from Lyn.)

2) Amino acid sequence

MGCIKSKRKDNLNDDGVDMDPMVSVIKPEMKIKLCMRGTVNGHN
FVIEGEGKGNPYEGTQILDNLNVTGAPLPFAYDILTTVFQYGNR
AFTKYPADIQDYFKQTFPEGYHWERSMTYEDQGICTATSNISMR
GDCFFYDIRFDGTFNPPNGPVMQKTLKWEPESTEKMYVEDGVLK
GDVNMRLLEGGGHYRCDFKTTYKAKKEVRLPDAHKIDHRIEIL
KHDKDYNKVKLYENAVARYSMLPSQAK

(Underlined sequences in red are from Lyn.)



CoralHue[®] PM-targeted mAG1 expression in HeLa cells.

CoralHue[®] mAG1 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).

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