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

Amalgaam MBL

Fluorescent Protein Expression Vector

CoralHue® humanized monomeric Midoriishi-Cyan 1 (phmMiCy1-MNL)

Code No.	Quantity
AM-V0110M	20 µg

BACKGROUND: The plasmid DNA encodes a fluorescent protein, ***CoralHue***® monomeric Midoriishi-Cyan (mMiCy1), which was originally cloned from the stony coral "Midori-ishi". It absorbs light maximally at 470 nm and emits cyan light at 496 nm. Wild-type ***CoralHue***® MiCy1 rapidly matures to form a fluorescent dimeric complex. ***CoralHue***® mMiCy1 is a monomeric vesion of MiCy1, and can be used to label proteins or subcellular structures. ***CoralHue***® hmMiCy1 sequence is codon-optimized for higher expression in mammalian cells. This plasmid has the flexible linker between fluorescence protein and multiple cloning site.

SOURCE: The ***CoralHue***® MiCy1 gene was cloned from stony coral (*Acropora* sp.).

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

PURITY: A260/A280 > 1.5

STORAGE: Store at -20°C.

SEQUENCE LANDMARKS:
CoralHue® hmMiCy1 coding sequence: bases 145-840
peptide linker: bases 73-144
CMV promoter: bases 4193-4765
SV40 polyA: bases 1003-1037
Kanamycin/Neomycin resistance gene: bases 2080-2871
pUC origin: bases 3459-4102
f1 origin: bases 1100-1555
SV40 origin: bases 1896-2031

REFERENCES:
1) Kogure, T., *et al., Nat. Biotechnol.* **24**, 577-581 (2006)
2) Karasawa, S., *et al., Biochem. J.* **381**, 307-312 (2004)

INTENDED USE:
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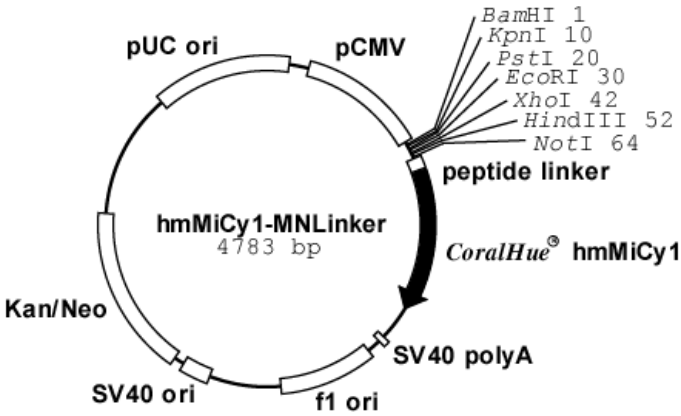
NOTICE:
Val is inserted to second amino acid of ***CoralHue***® hmMiCy1 to form kozak sequence. (The corresponding nucleotide sequence is GTG.)

RELATED PRODUCTS:
AM-V0061M ***CoralHue***® Midoriishi-Cyan 1 (pMiCy1-S1)
AM-V0110M ***CoralHue***® humanized monomeric Midoriishi-Cyan 1
AM-V0111M ***CoralHue***® monomeric Midoriishi-Cyan 1
AM-V0115M ***CoralHue***® humanized monomeric Midoriishi-Cyan 1
AM-V0116M ***CoralHue***® humanized monomeric Midoriishi-Cyan 1
AM-V0119M ***CoralHue***® humanized monomeric Midoriishi-Cyan 1
AM-V0261M ***CoralHue***® Mitochondria-targeted monomeric Midoriishi-Cyan 1
AM-VS0401M ***CoralHue***® mKusabira-Orange 1+Midoriishi-Cyan 1 Set (pmKO1/pMiCy1-S1)
AM-VS0402M ***CoralHue***® mKusabira-Orange 1+mMidoriishi-Cyan 1 Set (pmKO1/pmMiCy1-S1)




```
1                                                                                                                  73  peptide
|  BamHI      KpnI       PstI       EcoRI        XhoI       HindIII        NotI                                  |   linker
 gga tcc tca ggt acc gga act gca gca gag aat tcg gga aac tcg aga aca aag ctt gga tca gcg gcc gcc   aat tcc gct · · ·
  G   S   S   G   T   G   T   A   A   E   N   S   G   N   S   R   T   K   L   G   S   A   A   A     N   S   A
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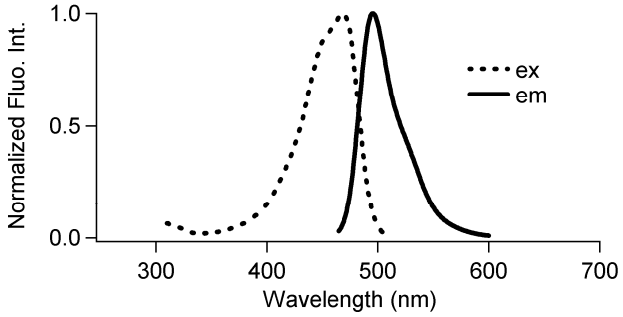
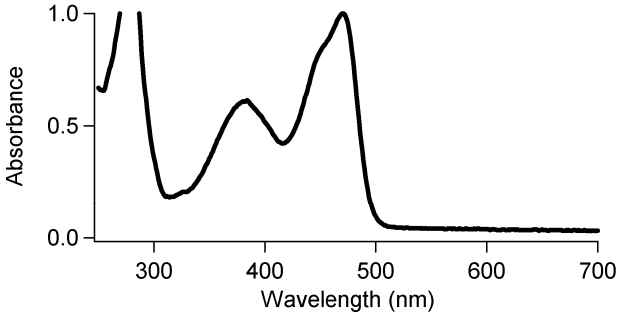
CoralHue® mMiCy1: 232amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
mMiCy1	470/496	22,150 (470 nm)	0.70	p*K* a=7.0





CoralHue® hmMiCy1/linker

1) DNA sequence

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AGCAGGGCATCGCCCAGGAGATGCGCACCAAGTACCGCATGGAG
GGCAGCGTGAACGGCCACGAGTTCACCATCGAGGGCGTGGGCAC
CGGCAACCCCTACGAGGGCAAGCAGACCTCCGAGCTGGTGATCA
TCAAGCCCAAGGGCAAGCCCCTGCCCTTCTCCTTCGACATCCTG
TCCACCGTGTTCCAGTACGGCAACAGGTGCTTCACCAAGTACCC
CGCCGACATGCCCGACTACTTCAAGCAGGCCTTCCCCGACGGCA
TGTCCTACGAGAGGTCCTTCCTGTTCGAGGACGGCGGCGTGGCC
ACCGCCAGCTGGAGCATCCGCCTGGAGGGCAACTGCTTCATCCA
CAACTCCATCTACCACGGCACCAACTTCCCCGCCGACGGCCCCG
TGATGAAGAAGCAGACCATCGGCTGGGACAAGTCCTCCGAGAAG
ATGAGCGTGGCCAAGGAGGTGCTGAGGGGCGACGTGACCCAGTT
CCTGCTGCTGGAGGGCGGCGGCTACCAGAGGTGCCAGCTGCACT
CCACCTACAAGACCGAGAAGCCCGTGGCCATGCCCCCCAGCCAC
GTGGTGGAGCACCAGATCGTGAGGACCGACCTGGGCCAGACCGC
CAAGGGCTTCAAGGTGAAGCTGGAGGAGCACGCCGAGGCCCACG
TGAACCCCCTGAAGGTGAAG

2) Amino acid sequence

NSADGGGGSGGSGGSGGGSTQGTGMVSYSKQGIAQEMRTKYRME
GSVNGHEFTIEGVGTGNPYEGKQTSELVIIKPKGKPLPFSFDIL
STVFQYGNRCFTKYPADMPDYFKQAFPDGMSYERSFLFEDGGVA
TASWSIRLEGNCFIHNSIYHGTNFPADGPVMKKQTIGWDKSSEK
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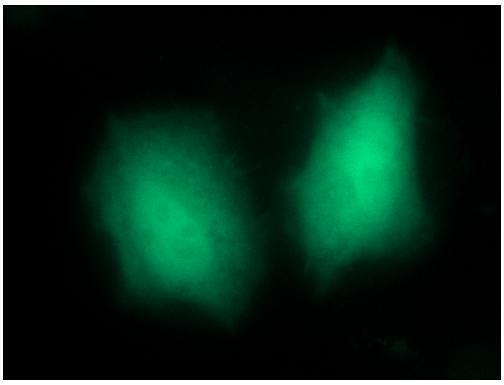

***CoralHue*® hmMiCy1 expression in HeLa cells.**

***CoralHue*® MiCy** 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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