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

Amalgaam MBL

Fluorescent Protein Cloning Vector

CoralHue®

monomeric Umikinoko-Green 1 (pmUkG1-S1)

Code No.	Quantity
AM-V0161M	20 µg

BACKGROUND The plasmid DNA encodes a monomeric version of the fluorescent protein ***CoralHue***® Umikinoko-Green 1 (UkG1). ***CoralHue***® UkG1 has been cloned from the soft coral, whose Japanese name is "Umikinoko". ***CoralHue***® UkG1 has been engineered to form a monomer, ***CoralHue***® monomeric Umikinoko-Green 1 (mUkG1) that absorbs light maximally at 483 nm and emits green light at 499 nm. ***CoralHue***® mUkG1 exhibit the brilliant fluorescence and extremely high pH stability. mUkG1 can be used to label proteins or subcellular structures or for FRET analysis.

SOURCE: The ***CoralHue***® UkG1 gene was originally cloned from the soft coral (*Sarcophyton* sp.).

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

PURITY: A260/A280 > 1.5

STORAGE: Stored at -20°C.

SEQUENCE LANDMARKS:
CoralHue® mUkG1 gene (including stop codon):
bases 2264-2947
Ampicillin resistance gene: bases 200-1059
ColE1 origin: bases 1062-2002

INTENDED USE:
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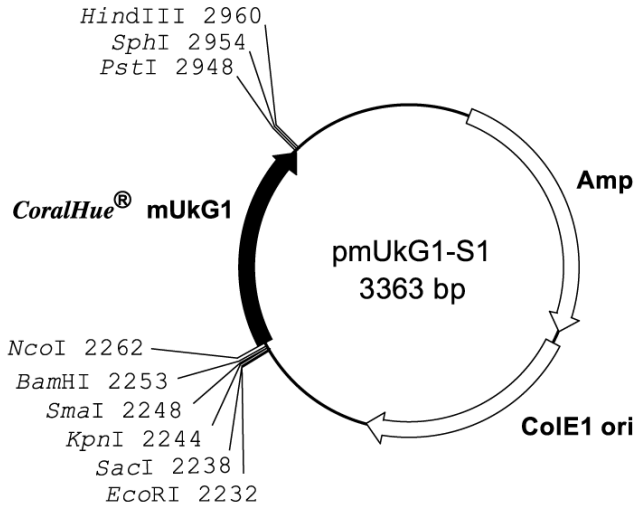
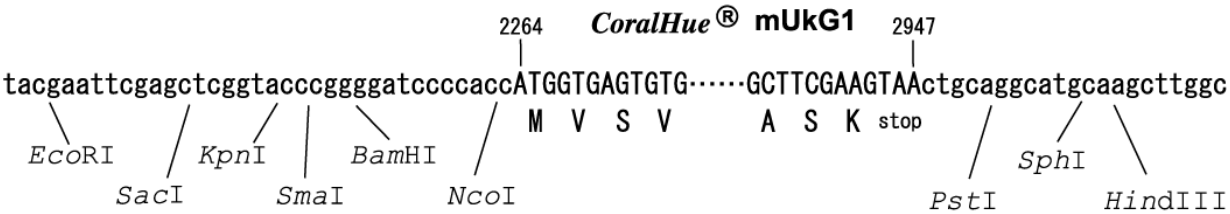
NOTICES:
1) pmUkG1-S1 is not expression vector. When ***CoralHue***® mUkG1 is expressed in any cells, the cDNA must be transferred to appropriate expression vectors by your own.
2) Val is inserted to second amino acid of ***CoralHue***® mUkG1 to form kozak sequence. (The corresponding nucleotide sequence is GTG.)

RELATED PRODUCTS:
AM-V0164M ***CoralHue***® humanized monomeric Umikinoko-Green 1 (phmUkG1-S1)
AM-V0165M ***CoralHue***® humanized monomeric Umikinoko-Green 1 (phmUkG1-MC1)
AM-V0166M ***CoralHue***® humanized monomeric Umikinoko-Green 1 (phmUkG1-MN1)



REFERENCE:
Tsutsui, H., *et al.*, *Nat. Methods.* **5**, 683-685 (2008)

Gen Bank:
Accession Numbers: AB425088



Amalgaam
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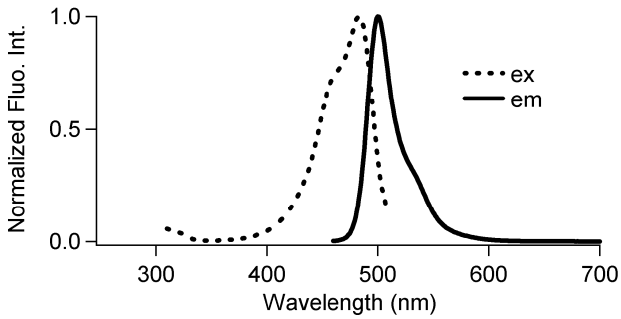
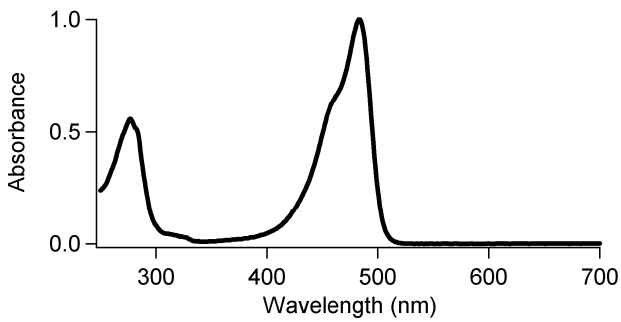
CoralHue® mUkG1: 227 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
mUkG1	483/499	60,000 (483 nm)	0.72	p*K* a=5.2





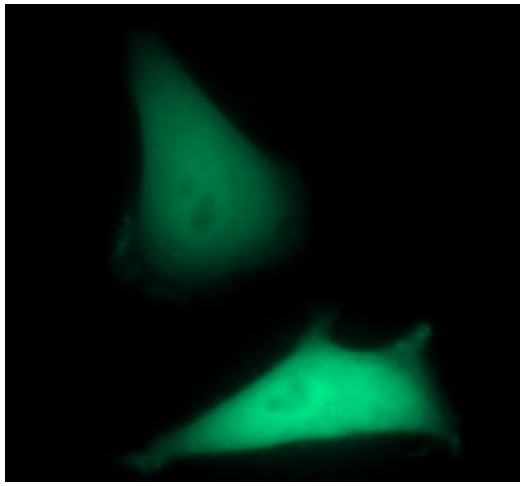
CoralHue® mUkG1

1) DNA sequence

ATGGTGAGTGTGATTAAAGAGGAAATGAAGATCAAGCTGCATAT
GGAAGGAAATGTAAACGGTCATGCATTTGTGATTGAAGGAGATG
GAAAAGGAAAGCCTTACGATGGGACACAGACTTTAAACCTGACA
GTGAAAGAAGGCGCACCTCTCCCTTTTTCTTACGACATCTTGAC
AAATGCGTTCCAGTACGGAAATAGAGCATTCACTAAATATCCAG
CCGATATACCAGACTATTTCAAGCAGACGTTTCCCGAGGGGTAT
TCATGGGAAAGAACCATGAGTTATGAAGACAACGCCATTTGCAA
CGTGAGAAGCGAGATCAGCATGGAAGGCGACTGCTTTATCTATA
AAATTCGGTTTGATGGCAAGAACTTTCCCCCCAATGGTCCAGTT
ATGCAGAAGAAAACTTTGAAGTGGGAACCATCCACTGAGATGAT
GTACGTGCGTGATGGGTTTCTGATGGGTGATGTTAACATGGCTC
TGTTGCTTGAAGGAGGTGGCCATCACCGATGTGACTTCAAAACT
TCCTACAAAGCGAAAAAGGTTGTGCAGTTGCCAGATGCCCACAA
GATCGACCATCGTATCGAGATCTTGAGCCATGACAGGGATTACA
GCAAAGTCAAGCTGTATGAGAATGCGGTTGCTCGCAATTCTTTG
CTGCCAAGTCAGGCTTCGAAG

2) Amino acid sequence

MVSVIKEEMKIKLHMEGNVNGHAFVIEGDGKGKPYDGTQTLNLT
VKEGAPLPFSYDILTNAFQYGNRAFTKYPADIPDYFKQTFPEGY
SWERTMSYEDNAICNVRSEISMEGDCFIYKIRFDGKNFPPNGPV
MQKKTLKWEPSTEMMYVRDGFLMGDVNMALLLEGGGHHRCDFKT
SYKAKKVVQLPDAHKIDHRIEILSHDRDYSKVKLYENAVARNSL
LPSQASK



***CoralHue*® mUkG1 expression in HeLa cells.**

***CoralHue*® mUkG1** 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 No. JP4852676