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

Amalgaam MBL

Fluorescent Protein Expression Vector

CoralHue®

Dronpa-Green 1 (pDG1-MN1)

Code No.	Quantity
AM-V0073M	20 µg

BACKGROUND: ***CoralHue***® Dronpa-Green1 (DG1) is a monomeric green fluorescent protein that is photochromic: its fluorescence can be reversibly turned "on" or "off" on demand by exposure to different wavelengths of light. ***CoralHue***® DG1 bleaches immediately following strong excitation at -500 nm. Bleached ***CoralHue***® DG1 completely regains its bright green fluorescence after irradiation at -400 nm. This unique property of ***CoralHue***® DG1 is useful for repeated measurement of the mobility dynamics (e.g. diffusion, transport, etc.) of fluorescently labeled molecules in living cells.

SOURCE: The ***CoralHue***® DG gene was originally cloned from stony coral (*Echinophyllia* 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® DG1 gene: bases 79-753
CMV promoter: bases 4106-4678
SV40 polyA: bases 916-950
Kanamycin/Neomycin resistance gene: bases 1993-2784
pUC origin: bases 3372-4015
f1 origin: bases 1013-1468
SV40 origin: bases 1809-1944

INTENDED USE:
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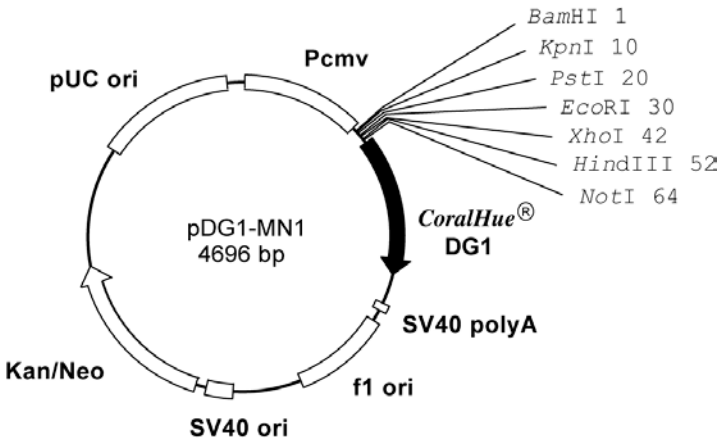
REFERENCE:
Ando, R., *et al.*, *Science* **306,** 1370-1373 (2004)

Gen Bank:
Accession Number: AB180726

NOTICE:
Val is inserted to second amino acid of ***CoralHue***® DG1 to form kozak sequence. (The corresponding nucleotide sequence is GTG)

RELATED PRODUCTS:
AM-V0071M ***CoralHue***® Dronpa-Green 1 (pDG1-S1)
AM-V0072M ***CoralHue***® Dronpa-Green 1 (pDG1-MC1)
AM-V0070M ***CoralHue***® humanized Dronpa-Green 1 (phDG1-MNL)
AM-V0079M ***CoralHue***® humanized Dronpa-Green 1 (phDG1-MCL)
AM-V0131M ***CoralHue***® Dronpa-Green 3 (pDG3-S1)

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                                                                                                                  
| BamHI | KpnI | PstI | EcoRI | XhoI | HindIII | NotI | 79 CoralHue® DG1
gga tcc tca ggt acc gga act gca gca gag aat tcg gga aac tcg aga aca aag ctt gga tca gcg gcc gcg ggg acc atg gtg agt
G S S G T G T A A E N S G N S R T K L G S A A A G T M V S
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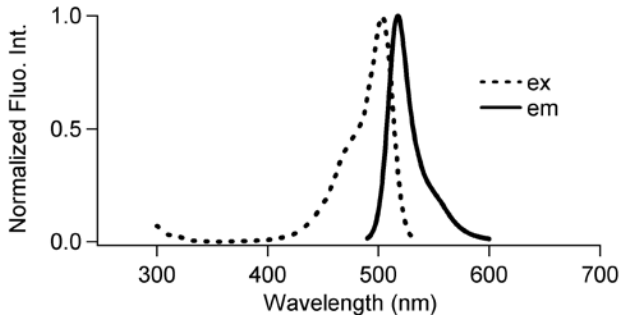
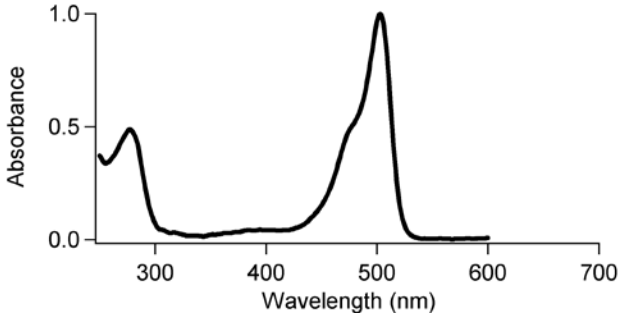
Amalgaam MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
URL: http://ruo.mbl.co.jp Email:support@mbl.co.jp Phone: (052) 238-1904

***CoralHue*® DG1:** 225 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M-1cm-1)	Fluorescence Quantum Yield	pH sensitivity
DG1	503/518	95,000 (503 nm)	0.85	p*K* a=5.0





CoralHue® DG1

1) DNA sequence

ATGGTGAGTGTGATTAAACCAGACATGAAGATCAAGCTGCGTAT
GGAAGGCGCTGTAAATGGACACCCGTTCGCGATTGAAGGAGTTG
GCCTTGGGAAGCCTTTCGAGGGAAAACAGAGTATGGACCTTAAA
GTCAAAGAAGGCGGACCTCTGCCTTTCGCCTATGACATCTTGAC
AACTGTGTTCTGTTACGGCAACAGGGTATTCGCCAAATACCCAG
AAAATATAGTAGACTATTTCAAGCAGTCGTTTCCTGAGGGCTAC
TCTTGGGAACGAAGCATGAATTACGAAGACGGGGGCATTTGTAA
CGCGACAAACGACATAACCCTGGATGGTGACTGTTATATCTATG
AAATTCGATTTGATGGTGTGAACTTTCCTGCCAATGGTCCAGTT
ATGCAGAAGAGGACTGTGAAATGGGAGCCATCCACTGAGAAATT
GTATGTGCGTGATGGAGTGCTGAAGGGTGATGTTAACATGGCTC
TGTCGCTTGAAGGAGGTGGCCATTACCGATGTGACTTCAAAACT
ACTTATAAAGCTAAGAAGGTTGTCCAGTTGCCAGACTATCACTT
TGTGGACCACCACATTGAGATTAAAAGCCACGACAAAGATTACA
GTAATGTTAATCTGCATGAGCACGCCGAAGCGCATTCTGAGCTG
CCGAGGCAGGCCAAG

2) Amino acid sequence

MVSVIKPDMKIKLRMEGAVNGHPFAIEGVGLGKPFEGKQSMDLK
VKEGGPLPFAYDILTTVFCYGNRVFAKYPENIVDYFKQSFPEGY
SWERSMNYEDGGICNATNDITLDGDCYIYEIRFDGVNFPANGPV
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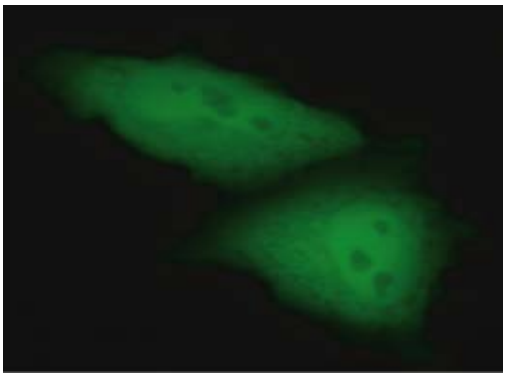
PRQAK



***CoralHue*® Dronpa-Green 1 expression in HeLa cells.**

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