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

Amalgaam MBL

Fluorescent Protein Expression Vector

CoralHue®

humanized Dronpa-Green 1 (phDG1-MNL)

Code No.	Quantity
AM-V0070M	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. ***CoralHue***® hDG1 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***® DG gene was cloned from the stony coral (*Echinophyllia* 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® hDG1 coding sequence: bases 145-819
peptide linker: bases 73-144
CMV promoter: bases 4172-4744
SV40 polyA: bases 982-1016
Kanamycin/Neomycin resistance gene: bases 2059-2850
pUC origin: bases 3438-4081
f1 origin: bases 1079-1534
SV40 origin: bases 1875-2010

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

INTENDED USE:
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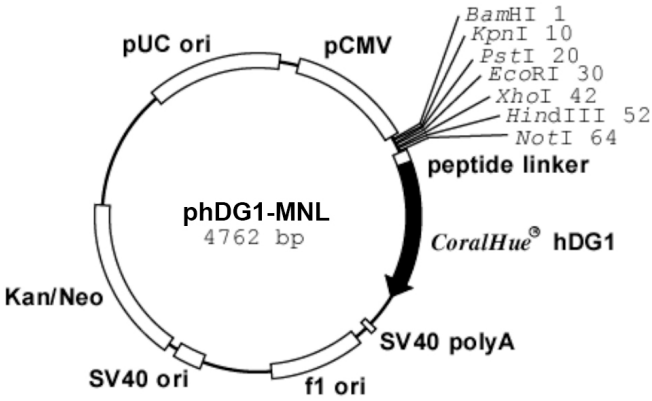
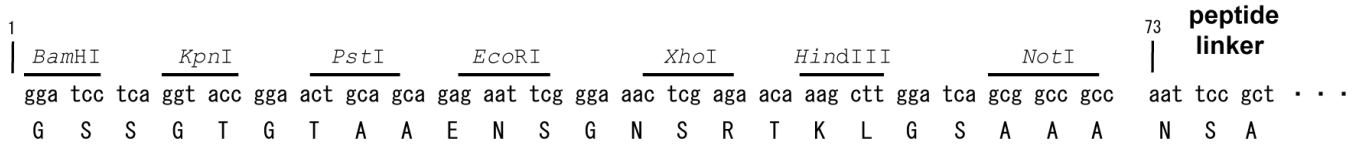
Gen Bank:
Accession Number: AB180726

NOTICE:
Val is inserted to second amino acid of ***CoralHue***® hDG1 to form kozak sequence. (The corresponding nucleotide sequence is GTG.)

RELATED PRODUCTS:
AM-V0079M ***CoralHue***® humanized Dronpa-Green 1 (phDG1-MCL)
AM-V0071M ***CoralHue***® Dronpa-Green 1 (pDG1-S1)
AM-V0072M ***CoralHue***® Dronpa-Green 1 (pDG1-MC1)
AM-V0073M ***CoralHue***® Dronpa-Green 1 (pDG1-MN1)
AM-V0131M ***CoralHue***® Dronpa-Green 3 (pDG3-S1)
AM-VS0207M ***CoralHue***® Dronpa-Green 1 Set (pDG1-MC1/MN1)
AM-VS0101M ***CoralHue***® Kaede+Kikume Green-Red +Dronpa-Green Set (Subcloning Vectors)
AM-VS0102M ***CoralHue***® Photoconvertible Expression N-term. Set (Dronpa+Kaede+KikGR)
AM-VS0103M ***CoralHue***® Photoconvertible Expression C-term. Set (Dronpa+Kaede+KikGR)

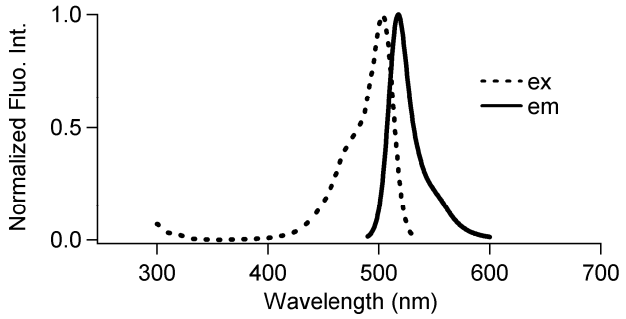


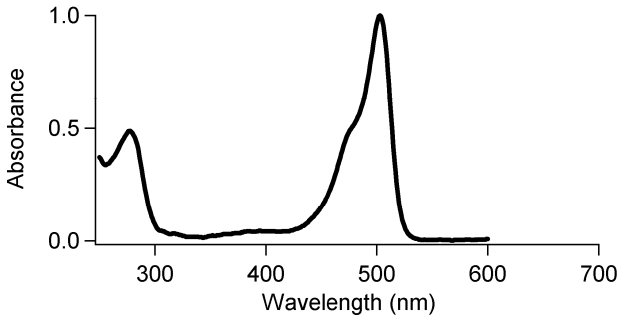


Amalgaam MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
URL: http://ruo.mbl.co.jp Email:support@mbl.co.jp Phone: (052) 238-1904

CoralHue® DG1: 225amino 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® hDG1/linker

1) DNA sequence

AATTCCGCTGACGGCGGCGGAGGATCGGGTGGTAGTGGTGGTTC
AGGAGGAGGATCGACCCAAGGAACCGGTATGGTGAGCGTGATCA
AGCCCGACATGAAGATCAAGCTGCGCATGGAGGGCGCCGTGAAC
GGCCACCCCTTCGCCATCGAGGGCGTGGGCCTGGGCAAGCCCTT
CGAGGGCAAGCAGAGCATGGACCTGAAGGTGAAGGAGGGCGGCC
CCCTGCCCTTCGCCTACGACATCCTGACCACCGTGTTCTGCTAC
GGCAACCGCGTGTTCGCCAAGTACCCCGAGAACATCGTGGACTA
CTTCAAGCAGAGCTTCCCCGAGGGCTACAGCTGGGAGCGCAGCA
TGAACTACGAGGACGGCGGCATCTGCAACGCCACCAACGACATC
ACCCTGGACGGCGACTGCTACATCTACGAGATCCGCTTCGACGG
CGTGAACTTCCCCGCCAACGGCCCCGTGATGCAGAAGCGCACCG
TGAAGTGGGAGCCCAGCACCGAGAAGCTGTACGTGCGCGACGGC
GTGCTGAAGGGCGACGTGAACATGGCCCTGAGCCTGGAGGGCGG
CGGCCACTACCGCTGCGACTTCAAGACCACCTACAAGGCCAAGA
AGGTGGTGCAGCTGCCCGACTACCACTTCGTGGACCACCACATC
GAGATCAAGAGCCACGACAAGGACTACAGCAACGTGAACCTGCA
CGAGCACGCCGAGGCCCACAGCGAGCTGCCCCGCCAGGCCAAG

2) Amino acid sequence

NSADGGGGSGGSGGSGGGSTQGTGMVSVIKPDMKIKLRMEGAVN
GHPFAIEGVGLGKPFEGKQSMDLKVKEGGPLPFAYDILTTVFCY
GNRVFAKYPENIVDYFKQSFPEGYSWERSMNYEDGGICNATNDI
TLDGDCYIYEIRFDGVNFPANGPVMQKRTVKWEPSTEKLYVRDG
VLKGDVNMALSLEGGGHYRCDFKTTYKAKKVVQLPDYHFVDHHI
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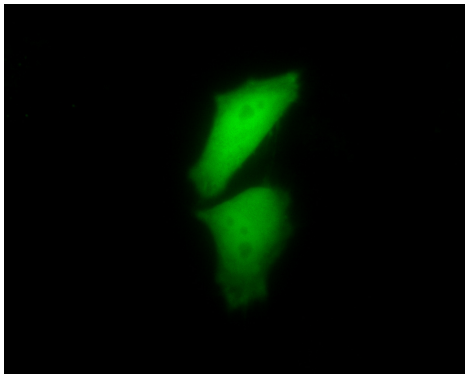

***CoralHue*® hDG1 expression in HeLa cells.**

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