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

Amalgaam
MBL

Fluorescent Protein Cloning Vector

CoralHue®

Dronpa-Green 1 (pDG1-S1)

Code No.	Quantity
AM-V0071M	20 µg

BACKGROUND: ***CoralHue***® Dronpa-Green 1 (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***® DG1 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 (including stop codon): bases 2264-2941
Ampicillin resistance gene: bases 200-1059
*Col*E1 origin: bases 1062-2002

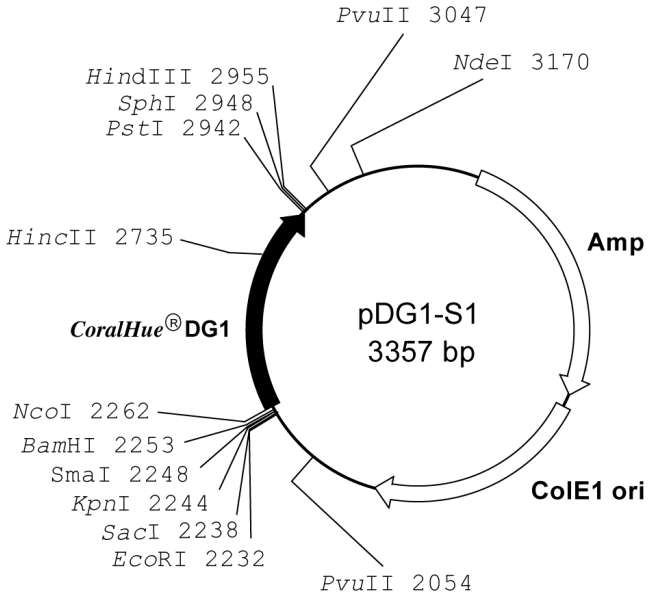
INTENDED USE:
For Research Use Only. Not for use in diagnostic procedures.

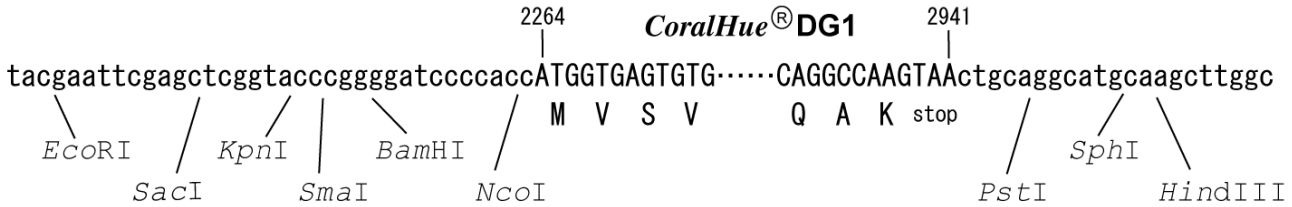
REFERENCE:
Ando, R., *et al.*, *Science* **306,** 1370-1373 (2004)

Gen Bank:
Accession Number: AB180726

NOTICES:
1) pDG1-S1 is not expression vector. When ***CoralHue***® DG1 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***® DG1 to form kozak sequence. (The corresponding nucleotide sequence is GTG)

RELATED PRODUCTS:
AM-V0072M ***CoralHue***® Dronpa-Green 1 (pDG1-MC1)
AM-V0073M ***CoralHue***® Dronpa-Green 1 (pDG1-MN1)
AM-V0131M ***CoralHue***® Dronpa-Green 3 (pDG3-S1)

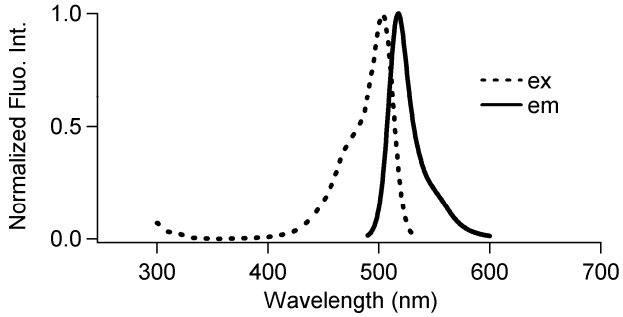


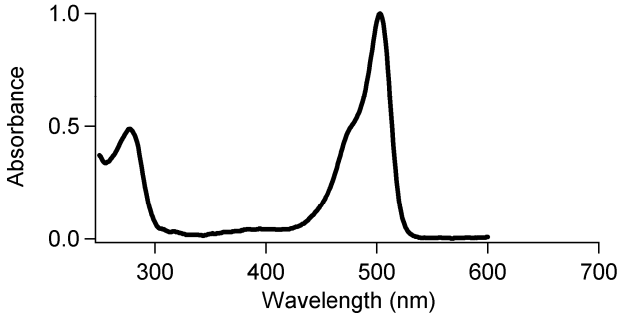


Amalgaam
MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.
URL: http://ruo.mbl.co.jp Email:support@mbl.co.jp Phone: (052) 238-1904

***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





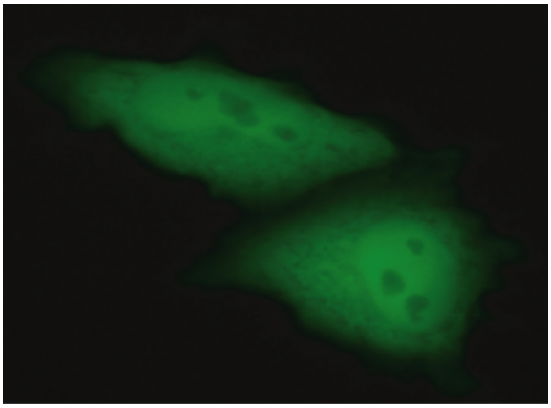
CoralHue® DG1

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
MQKRTVKWEPSTEKLYVRDGVLKGDVNMALSLEGGGHYRCDFKT
TYKAKKVVQLPDYHFVDHHIEIKSHDKDYSNVNLHEHAEAHSEL
PRQAK



***CoralHue*® DG1 expression in HeLa cells.**

***CoralHue*® Dronpa-Green 1** is the product licensed to MBL Co., Ltd., for patent application JP4695073 and US7897385, US8034614 owned by the Institute of Physical and Chemical Research (RIKEN)