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

Amalgaam MBL

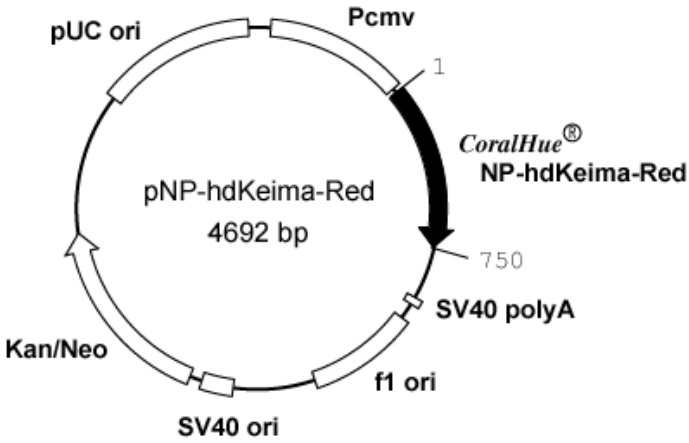
Fluorescent Protein Expression Plasmid

CoralHue®

Nucleoplasm-targeted humanized dimeric Keima-Red

Code No.	Quantity
AM-V0274M	20 µg

BACKGROUND: This plasmid is designed for expression of Nucleoplasm-targeted ***CoralHue***® humanized dimeric Keima-Red (NP-hdKeima-Red) in mammalian cells. ***CoralHue***® hdKeima-Red, which was originally cloned from the stony coral whose Japanese name is "Komon-Sango." ***CoralHue***® hdKeima-Red absorbs light maximally at 440 nm and emits red light at 616 nm. Thus ***CoralHue***® hdKeima-Red exhibits an extremely large Stokes shift (176 nm). Targeting of hdKeima-Red to the Nucleoplasm is achieved with the signal peptide fused to the C-terminus of hdKeima-Red.



SOURCE: The ***CoralHue***® dKeima-Red gene was originally cloned from the stony coral (*Montipora* sp.).

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

PURITY: A260/A280 > 1.5

STORAGE: Store at -20°C

SEQUENCE LANDMARKS (bases):
CoralHue® NP-hdKeima-Red (Including Stop Codon): bases 1-753
CMV promoter: bases 4096-4668
SV40 polyA: bases 906-940
Kanamycin/Neomycin resistance gene: bases 1983-2774
pUC origin: bases 3363-4005
f1 origin: bases 1003-1458
SV40 origin: bases 1799-1934

INTENDED USE:
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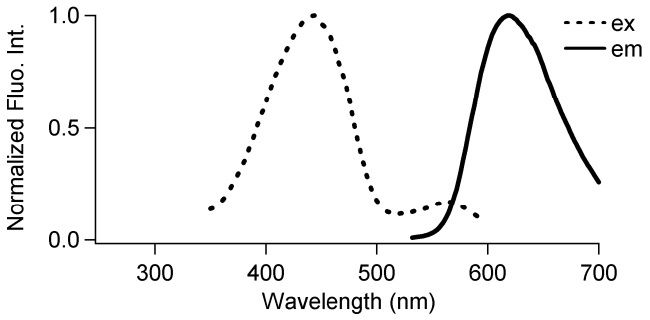
REFERENCE:
Kogure, T., *et al.*, *Nat. Biotechnol.* **24**, 577-581 (2006)

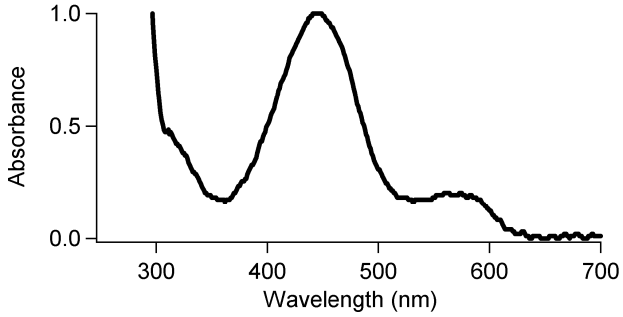
GenBank:
Accession Numbers: AB209967, AB209968, AB209969

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

CoralHue® dKeima-Red: 222 amino acids (without NP signal sequence)

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
dKeima-Red	440/616	24,600 (400 nm)	0.31	p*K* a=6.5





CoralHue® NP-hdKeima-Red

1) DNA sequence

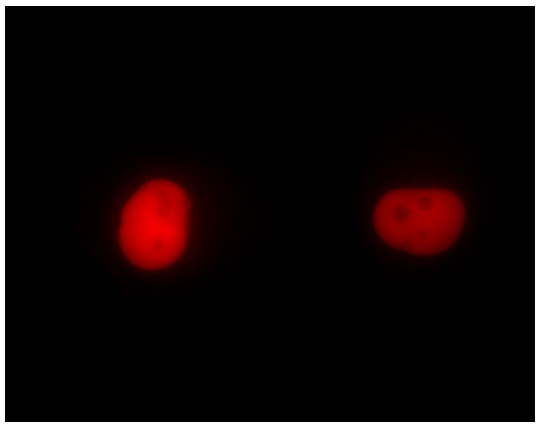
ATGGTGAGCGTGATCGCCAAGCAGATGACCTACAAGGTGTACAT
GTCCGGCACCGTGAACGGCCACTACTTCGAGGTGGAGGGCGACG
GCAAGGGCAAGCCCTACGAGGGCGAGCAGACCGTGAAGCTGACC
GTGACCAAGGGCGGCCCCCTGCCCTTCGCCTGGGACATCCTGTC
CCCCCTGTTCCAGTACGGCAGCATCCCCTTCACCAAGTACCCCG
AGGACATCCCCGACTACGTGAAGCAGAGCTTCCCCGAGGGCTAC
ACCTGGGAGAGGACCATGAACTTCGAGGACGGCGCCGTGTGCAC
CGTGAGCAACGACTCCAGCATCCAGGGCAACTGCTTCATCTACA
ACGTGAAGATCAGCGGCACCAACTTCCCCCCCAACGGCCCCGTG
ATGCAGAAGAAGACCCAGGGCTGGGAGCCCAGCACCGAGAGGCT
GTTCGCCAGGGACGGAATGCTGATCGGCAACGACTACATGGCCC
TGAAGCTGGAGGGCGGCGGCCACTACCTGTGCGAGTTCAAGTCC
ACCTACAAGGCCAAGAAGCCCGTGAGGATGCCCGGCTACCACTA
CATCGACAGGAAGCTGGACGTGACCAGCCACAACAGGGACTACA
CCTCCGTGGAGCAGTGCGAGATCGCCATCGCCAGGCACAGCCTG
CTGGGCGGCAGCAGCGGCGGATCCGGTGATGAAGTCGAAGGAGT
GGAAGAAGTAGCTAAGAAGAAGAGTAAAAAGGAAAAGGATAAAA
AG

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)

2) Amino acid sequence

MVSVIAKQMTYKVYMSGTVNGHYFEVEGDGKGKPYEGEQTVKLT
VTKGGPLPFAWDILSPLFQYGSIPFTKYPEDIPDYVKQSFPEGY
TWERTMNFEDGAVCTVSNDSSIQGNCFIYNVKISGTNFPPNGPV
MQKKTQGWEPSTERLFARDGMLIGNDYMALKLEGGGHYLCEFKS
TYKAKKPVRMPGYHYIDRKLDVTSHNRDYTSVEQCEIAIARHSL
LGGSSGGSGDEVEGVEEVAKKKSKKEKDKK

(Underlined sequences in red are from poly (ADP-ribose) polymerase.)



***CoralHue*® NP-hdKeima-Red expression in HeLa cells.**

***CoralHue*® NP-hdKeima-Red** 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 Nos. JP5147915, US8420781 and EP2314682