

Fluorescent Protein Cloning Vector

*CoralHue*TM

humanized dimeric Keima570 (phdKeima570-S1)

Code No.
AM-V0124M

Quantity
20 µg

BACKGROUND: This plasmid contains the coding sequence of a dimeric version of the fluorescent protein “Keima570,” which was originally cloned from the stony coral whose Japanese name is “Komon-Sango.” *CoralHue*TM dimeric Keima570 (dKeima570) absorbs light maximally at 440 nm and emits orange-red light at 570 nm. Thus *CoralHue*TM dKeima570 exhibits an extremely large Stokes shift (130 nm). The orange-red fluorescence is stable under usual aerobic conditions. Because of this unique property of *CoralHue*TM dKeima570, it is useful for multicolor imaging. *CoralHue*TM hdKeima570 sequence is codon-optimized for higher expression in mammalian cells.

SOURCE: The *CoralHue*TM dKeima570 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:

*CoralHue*TM hdKeima570 coding sequence (including stop codon): bases 2264 – 2932
Ampicillin resistance gene: bases 200 - 1059
CoIE1 origin: bases 1062 - 2002

INTENDED USE:

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

REFERENCE:

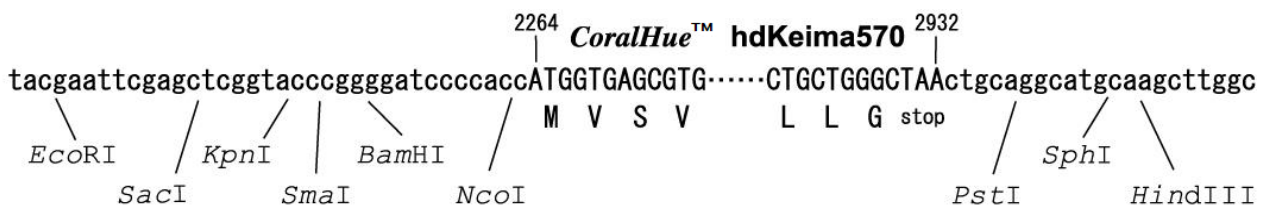
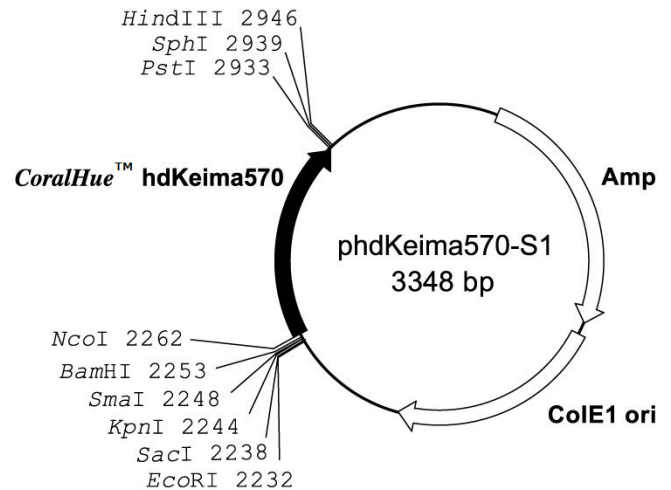
Kogure, T., et al., *Nat. Biotechnol.* **24**, 577-581 (2006)

NOTICES:

- 1) phdKeima570-S1 is not expression vector. When *CoralHue*TM hdKeima570 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*TM hdKeima570 to form kozak sequence. (The corresponding nucleotide sequence is GTG)

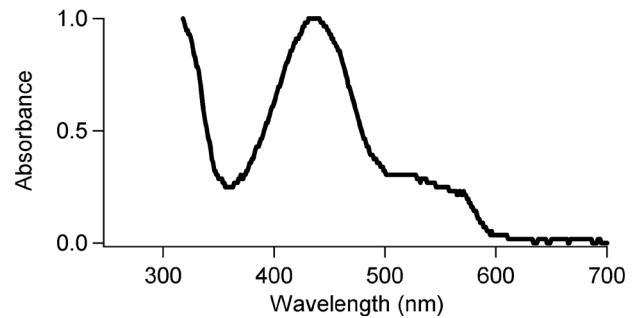
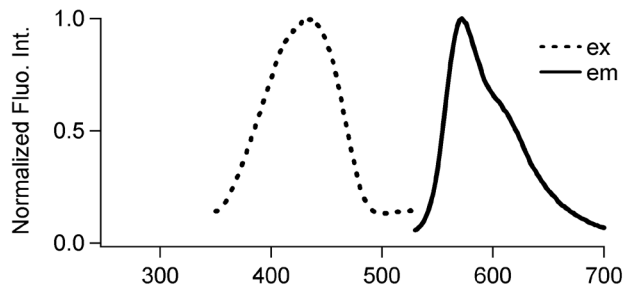
RELATED PRODUCTS:

- AM-V0120M *CoralHue*TM humanized dimeric Keima570 (phdKeima570-MNL)
- AM-V0129M *CoralHue*TM humanized dimeric Keima570 (phdKeima570-MCL)
- AM-V0324M *CoralHue*TM Nucleoplasm-targeted humanized dKeima570 (pNP-hdKeima570)
- AM-V0121M *CoralHue*TM dimeric Keima570 (phdKeima570-S1)



CoralHue™ dKeima570: 222 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M ⁻¹ cm ⁻¹)	Fluorescence Quantum Yield	pH sensitivity
dKeima570	440/570	14,000 (440 nm)	0.15	pK _a =6.5



CoralHue™ hdKeima570

1) DNA sequence

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ATGGTGAGCGTGATCGCCAAGCAGATGACCTACAAGGTGTACAT
GTCCGGCACCGTGAACGGCCACTACTTCGAGGTGGAGGGCGACG
GCAAGGGCAAGCCCTACGAGGGCGAGCAGACCGTGAAGCTGACC
GTGACCAAGGGCGGCCCCCTGCCCTTCGCTGGGACATCCTGTC
CCCCCTGATGTGCTACGGCAGCATCCCCTTCACCAAGTACCCCG
AGGACATCCCCGACTACGTGAAGCAGAGCTCCCCGAGGGCTAC
ACCTGGGAGAGGACCATGAACTTCGAGGACGGCGCCGTGTGCAC
CGTGAGCAACGACTCCAGCATCCAGGGCAACTGCTTCATCTACA
ACGTGAAGATCAGCGGCACCAACTTCCCCCAACGGCCCCGTG
ATGCAGAAGAAGACCCAGGGCTGGGAGCCCAGCACCGAGAGGCT
GTTCCGCAGGGACGGAATGCTGATCGGCAACGACTACATGGCCC
TGAAGCTGGAGGGCGGGCCACTACCTGTGCGAGTTC AAGTCC
ACCTACAAGGCCAAGAAGCCCGTGAGGATGCCCGGCTACCACTA
CATCGACAGGAAGCTGGACGTGACCAGCCACAACAGGGACTACA
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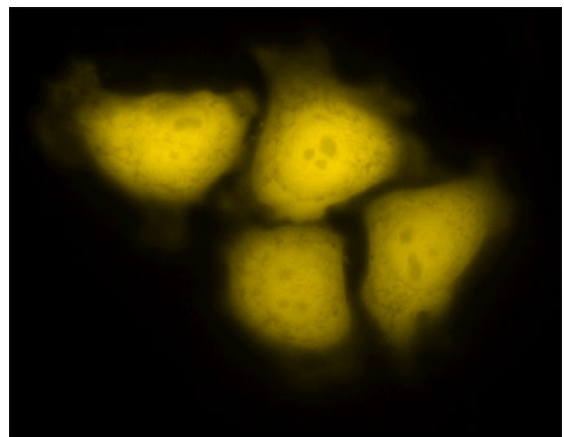
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2) Amino acid sequence

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MVSVIAKQMTYKVYMSGTVNGHYFEVEGDGKGPYEGEQTVK
LTVTKGGPLPFAWDILSPLMCYGSIPFTKYPEDIPDYVKQSF
PEGYTWERTMNFEDGAVCTVSNDSIIQGNCFIYNVKISGTNF
PPNGPVMQKKTQGWEPPERL FARDGMLIGNDYMALKLEGGG
HYLCEFKSTYKAKKPVMPGYHYIDRKL DVTSHNRDYTSVEQ
CEIAIARHSLLG

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CoralHue™ hdKeima570 expression in HeLa cells.

CoralHue™ hdKeima570 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).

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