

**Fluorescent Protein Cloning Vector**

*CoralHue*<sup>®</sup>

**dimeric Keima570 (pdKeima570-S1)**

Code No.  
AM-V0121M

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*<sup>®</sup> dimeric Keima570 (dKeima570) absorbs light maximally at 440 nm and emits orange-red light at 570 nm. Thus *CoralHue*<sup>®</sup> dKeima570 exhibits an extremely large Stokes shift (130 nm). Because of this unique property of *CoralHue*<sup>®</sup> dKeima570, it is useful for multicolor imaging. The orange-red fluorescence is stable under usual aerobic conditions.

**SOURCE:** The *CoralHue*<sup>®</sup> 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*<sup>®</sup> dKeima570 coding sequence (including stop codon): bases 2264-2932  
Ampicillin resistance gene: bases 200-1059  
*ColE1* origin: bases 1062-2002

**INTENDED USE:**

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

**REFERENCE:**

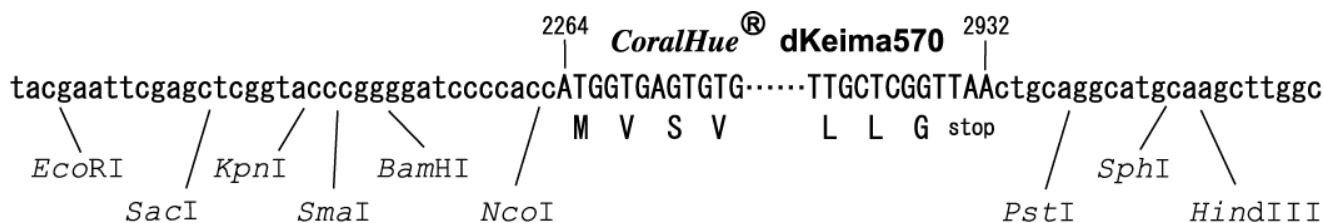
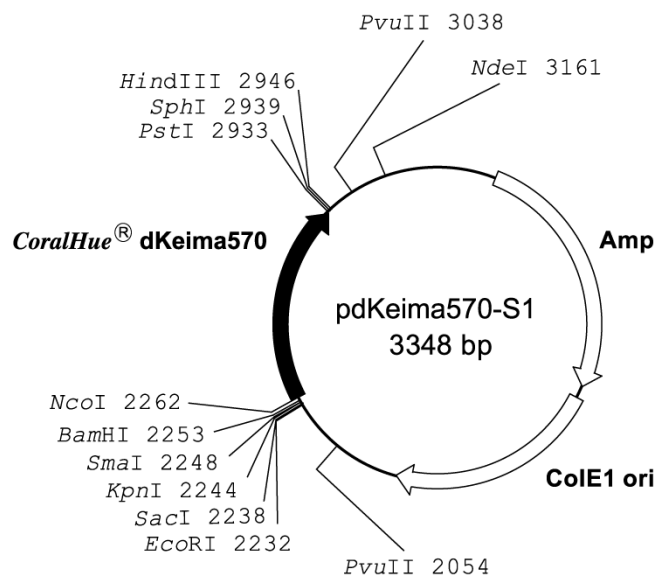
Kogure, T., et al., *Nat. Biotechnol.* **24**, 577-581 (2006)

**NOTICES:**

- 1) pdKeima570-S1 is not expression vector. When *CoralHue*<sup>®</sup> dKeima570 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*<sup>®</sup> dKeima570 to form kozak sequence. (The corresponding nucleotide sequence is GTG.)

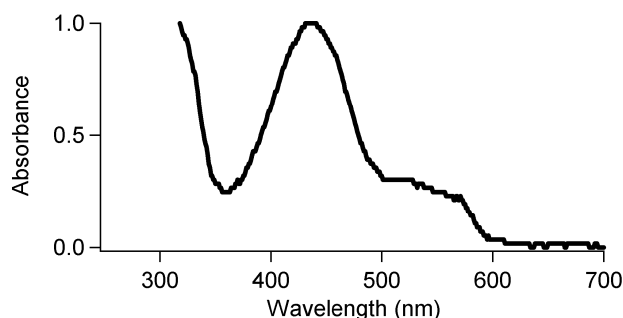
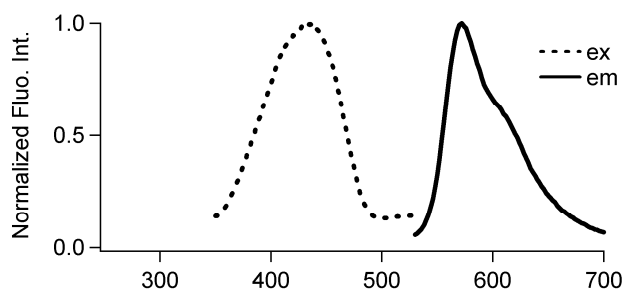
**RELATED PRODUCTS:**

- AM-V0124M *CoralHue*<sup>®</sup> humanized dimeric Keima570 (phdKeima570-S1)
- AM-V0120M *CoralHue*<sup>®</sup> humanized dimeric Keima570 (phdKeima570-MNL)
- AM-V0129M *CoralHue*<sup>®</sup> humanized dimeric Keima570 (phdKeima570-MCL)
- AM-V0324M *CoralHue*<sup>®</sup> Nucleoplasm-targeted humanized dKeima570 (pNP-hdKeima570)



**CoralHue<sup>®</sup> dKeima570: 222 amino acids**

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M <sup>-1</sup> cm <sup>-1</sup> )	Fluorescence Quantum Yield	pH sensitivity
dKeima570	440/570	14,000 (440 nm)	0.15	pK <sub>a</sub> =6.5



**CoralHue<sup>®</sup> dKeima570**

**1) DNA sequence**

```

ATGGTGAGTGTGATCGCTAAACAAATGACCTACAAGGTTTATAT
GTCAGGCACGGTCAATGGACTACTTTGAGGTGGAAGGCGATG
GAAAAGGAAAGCCTTACGAGGGAGAGCAGACAGTAAAGCTCACT
GTCACCAAGGGTGGACCTCTGCCATTTGCTTGGGATATATTATC
ACCACTGATGTGTACGGAAGCATACCATTCACGAAGTACCCTG
AAGACATCCCTGATTATGTAAGCAGTCATTCCCTGAGGGATAT
ACATGGGAGAGGACCATGAACTTTGAAGATGGTGCAGTGTGTAC
TGTCAGGAATGATTCCAGCATCCAAGGCAACTGTTTCATCTACA
ATGTCAAATCTCTGGTACGAACTTTCTCCCAATGGACCTGTT
ATGCAGAAGAAGACACAGGGCTGGGAACCCAGCACTGAGCGTCT
CTTTGCAGGAGATGGAATGCTGATAGGAAACGATTATATGGCTC
TGAAGTTGGAAGGAGGTGGTCACTATTTGTGTGAGTTCAAATCT
ACTTACAAGGCAAAGAAGCCTGTGAGGATGCCAGGGTATCACTA
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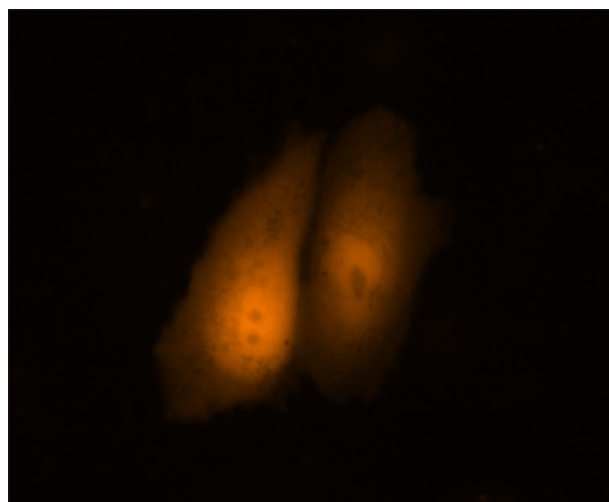
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**2) Amino acid sequence**

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MVSVIAKQMTYKVYMSGTVNGHYFEVEGDGKPKPYEGEQTVK
LTVTKGGPLPFAWDILSPLMCYGSIPFTKYPEDIPDYVKQSF
PEGYTWERTMNFEDGAVCTVSNDSIQGNCFIYNVKISGTNF
PPNGPVMQKKTQGWPSTERLFARDGMLIGNDYMALKLEGGG
HYLCEFKSTYKAKKPVMPGYHYIDRKL DVTSHNRDYSVEQ
CEIAIARHSLLG

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**CoralHue<sup>®</sup> dKeima570 expression in HeLa cells.**

CoralHue<sup>®</sup> dKeima570 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).

Use of CoralHue<sup>®</sup> dKeima570 requires a license from MBL Co., Ltd. MBL grants non-profit research organizations the right to use the product for non-commercial research purposes. For commercial entities a commercial license is required. For more information, please contact [support@mbi.co.jp](mailto:support@mbi.co.jp)

\*\*\*Patent Nos. JP5147915, US8420781 and EP2314682