

Fluorescent Protein Cloning Vector

CoralHue[®]

monomeric Keima-Red (pmKeima-Red-S1)

Code No.

AM-V0091M

Quantity

20 µg

BACKGROUND: This plasmid contains the coding sequence of a monomeric vesion of the fluorescent protein “Keima-Red”, which was cloned from the stony coral whose Japanese name is “Komon-Sango”. **CoralHue[®]** mKeima-Red absorbs light maximally at 440 nm and emits red light at 620 nm. Thus **CoralHue[®]** mKeima-Red exhibits an extremely large Stokes shift (180 nm). The red fluorescence is stable under usual aerobic conditions. The combination of red emission, a very large Stokes shift, stability at 37°C in eukaryotic cells, and being monomeric make mKeima-Red a superb reporter protein for labeling proteins or subcellular structures in multicolor fluorescence analyses.

SOURCE: The **CoralHue[®]** mKeima-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:

CoralHue[®] mKeima-Red coding sequence (including stop codon): bases 2264 – 2932
Ampicillin resistance gene: bases 200 - 1059
ColE1 origin: bases 1062 - 2002

REFERENCE:

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

INTENDED USE:

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

GenBank:

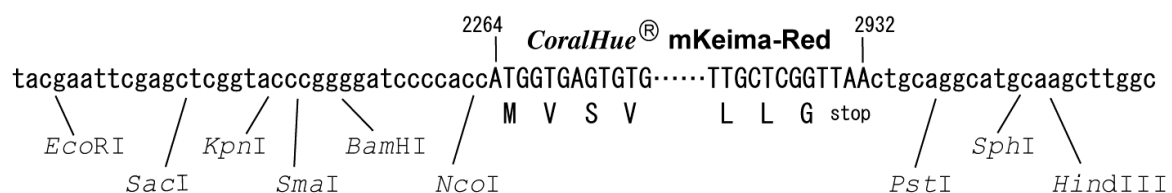
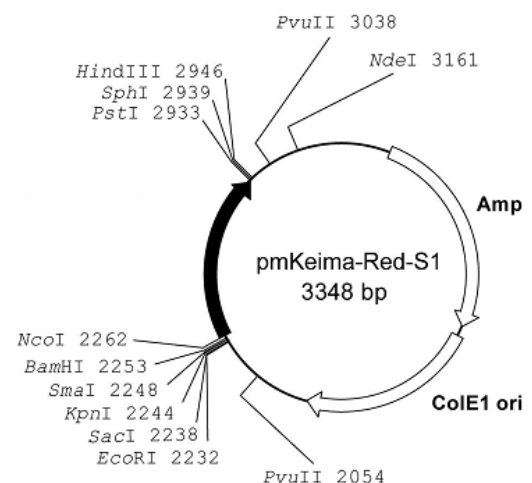
Accession Numbers: AB209967, AB209968, AB209969

NOTICES:

- 1) **CoralHue[®]** mKeima-Red is a monomer.
- 2) pmKeima-Red-S1 is not an expression plasmid. When **CoralHue[®]** mKeima-Red is to be expressed in cells, the cDNA must be cloned into an appropriate expression vector.
- 3) The sequence around the initiation methionine (Met) codon has been modified to conform the Kozak consensus sequence. As a result, a Val codon (GTG) is inserted as the second amino acid of **CoralHue[®]** mKeima-Red.

RELATED PRODUCTS:

- AM-V0090M **CoralHue[®]** humanized monomeric Keima-Red
AM-V0091M **CoralHue[®]** monomeric Keima-Red
AM-V0093M **CoralHue[®]** monomeric Keima-Red
AM-V0094M **CoralHue[®]** humanized monomeric Keima-Red
AM-V0099M **CoralHue[®]** humanized monomeric Keima-Red
AM-V0251M **CoralHue[®]** Mitochondria-targeted monomeric Keima-Red
AM-V0253M **CoralHue[®]** Plasma Membrane-targeted mKeima-Red
AM-V0274M **CoralHue[®]** Nucleoplasm-targeted humanized dKeima-Red
AM-VS304M **CoralHue[®]** Keima-Red Set (pmKeima-Red/pdKeima-Red-S1)



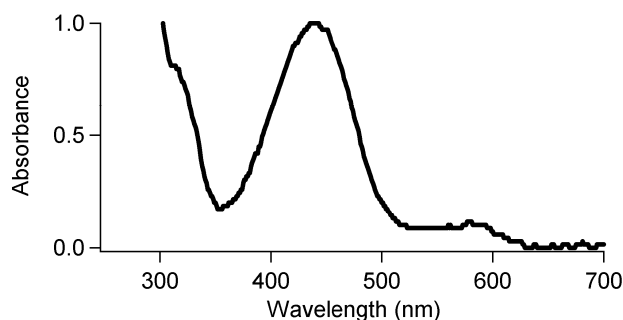
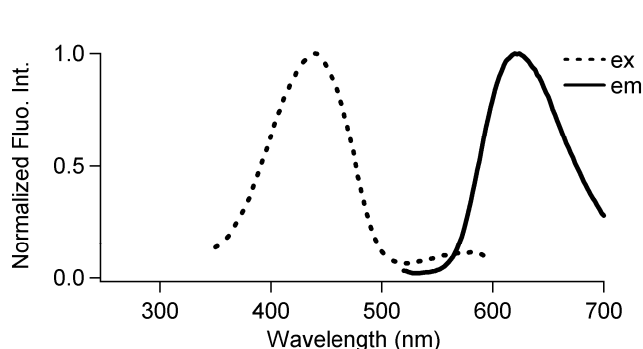
Amalgaam

MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.

URL: <http://ruo.mbl.co.jp> Email: support@mbi.co.jp Phone: (052) 238-1904

CoralHue[®] mKeima-Red: 222 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M ⁻¹ cm ⁻¹)	Fluorescence Quantum Yield	pH sensitivity
mKeima-Red	440/620	14,000 (440 nm)	0.24	pK _a =6.5



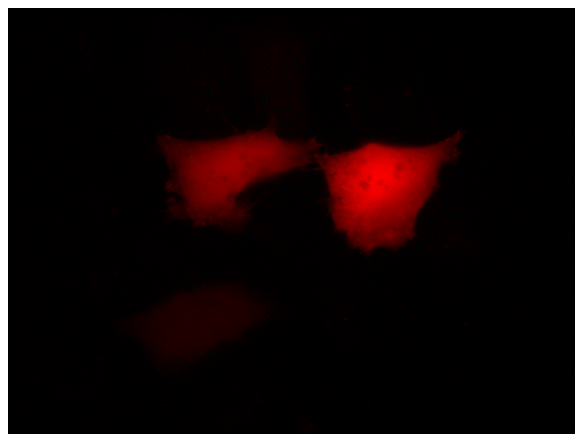
CoralHue[®] mKeima-Red

1) DNA sequence

ATGGTGAGTGTGATCGCTAAACAAATGACCTACAAGGTTTATAT
 GTCAGGCACGGTCAATGGACTACTTTGAGGTGGAAGGCGATG
 GAAAAGGAAAGCCTTACGAGGGAGAGCAGACAGTAAAGCTCACT
 GTCACCAAGGGTGGACCTCTGCCATTTGCTTGGGATATTTTATC
 ACCACAGCTTCAGTACGGAAGCATACCATTACCAAGTACCCTG
 AAGACATCCCTGATTATTTCAAGCAGTCATTCCCTGAGGGATAT
 ACATGGGAGAGGAGCATGAACTTTGAAGATGGTGCAGTGTGTAC
 TGTCAGCAATGATTCCAGCATCCAAGGCAACTGTTTCATCTACA
 ATGTCAAATCTCTGGTGAGAACTTTCTCCCAATGGACCTGTT
 ATGCAGAAGAAGACACAGGGCTGGGAACCCAGCACTGAGCGTCT
 CTTTGCACGAGATGGAATGCTGATAGGAAACGATTATATGGCTC
 TGAAGTTGGAAGGAGGTGGTCACTATTTGTGTGAATTTAAATCT
 ACTTACAAGGCAAAGAAGCCTGTGAGGATGCCAGGGGCCACGA
 GATTGACCGCAAACCTGGATGTAACCAGTCACAACAGGGATTACA
 CATCTGTTGAGCAGTGTGAAATAGCCATTGCACGCCACTCTTTG
 CTCGGT

2) Amino acid sequence

MVSVIAKQMTYKVYMSGTVNGHYFEVEGDGKPKPYEGEQTVK
 LTVTKGGPLPFAWDILSPQLQYGSIPFTKYPEDIPDYFKQSF
 PEGYTWERSMNFEDGAVCTVSNDSIQGNCFIYNVKISGENF
 PPNGPVMQKKTQGWPSTERLFARDGMLIGNDYMALKLEGGG
 HYLCEFKSTYKAKKPVMPGRHEIDRKL DVTSHNRDYSVEQ
 CEIAIARHSLLG



CoralHue[®] mKeima-Red expression in HeLa cells.

CoralHue[®] Keima-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).

Use of **CoralHue[®] Keima-Red** 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