

Fluorescent Protein Expression Plasmid

CoralHue[®]

Plasma Membrane-targeted mKeima-Red (pPM-mKeima-Red)

Code No.
AM-V0253M

Quantity
20 µg

BACKGROUND: This plasmid is designed for expression of Plasma membrane-targeted *CoralHue*[®] monomeric Keima-Red (mKeima-Red) in mammalian cells. *CoralHue*[®] Keima-Red has been cloned from the stony coral, whose Japanese name is “Komon-Sango”. A monomeric vesion of *CoralHue*[®] monomeric Keima-Red (mKeima-Red) absorbs light maximally at 440 nm and emits red light at 620 nm with a large Storks-shift, providing another option for multicolor fluorescence analyses. Targeting of mKeima-Red to the plasma membrane is achieved with the signal peptide fused to the N-terminus of mKeima-Red.

SOURCE: The *CoralHue*[®] Keima-Red gene was originally cloned from the stony coral “Komon-Sango (*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[®] PM-mKeima-Red (Including Stop Codon):
bases 1-732
CMV promoter: bases 4075-4647
SV40 polyA: bases 885-919
Kanamycin/Neomycin resistance gene: bases 1962-2753
pUC origin: bases 3341-3984
f1 origin: bases 982-1437
SV40 origin: bases 1778-1913

INTENDED USE:

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

REFERENCE:

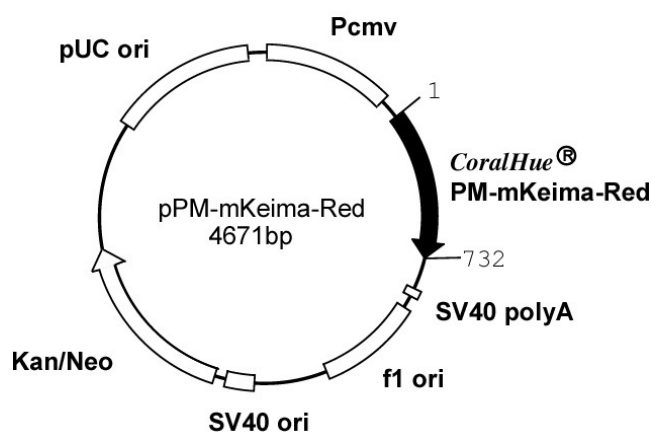
Kogure, T., *et al.*, *Nat. Biotechnol.* **24**, 577-581 (2006)

GenBank:

Accession Numbers: AB209967, AB209968, AB209969

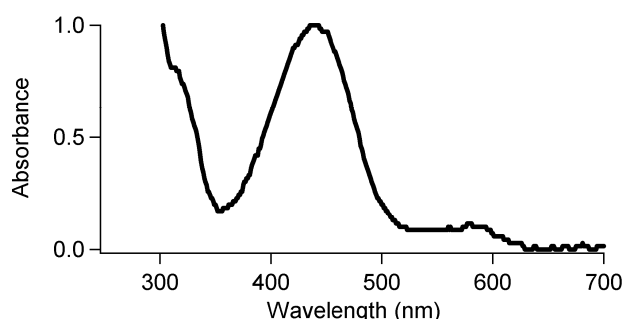
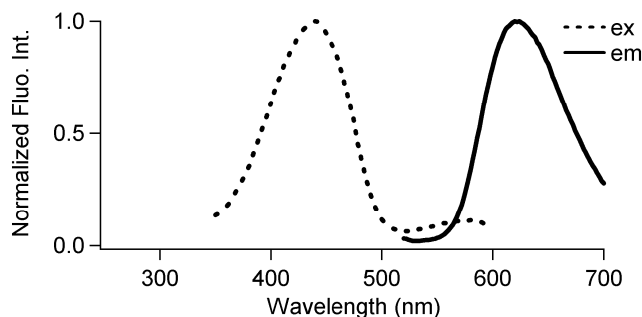
RELATED PRODUCTS:

AM-V0251M *CoralHue*[®] Mitochondria-targeted monomeric Keima-Red (pMT-mKeima-Red)
AM-V0251HM *CoralHue*[®] Mitochondria-targeted monomeric Keima-Red (Hyg)
AM-V0259M pMitophagy Keima-Red mPark2 (Kan)
AM-V0259HM pMitophagy Keima-Red mPark2 (Hyg)
AM-V0091M *CoralHue*[®] monomeric Keima-Red (pmKeima-Red-S1)
AM-V0093M *CoralHue*[®] monomeric Keima-Red (pmKeima-Red-MN1)



CoralHue[®] mKeima-Red: 222 amino acids (without PM signal sequence)

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
mKeima-Red	440/620	14,400 (440 nm)	0.24	pK _a =6.5



CoralHue[®] PM-mKeima-Red

1) DNA sequence

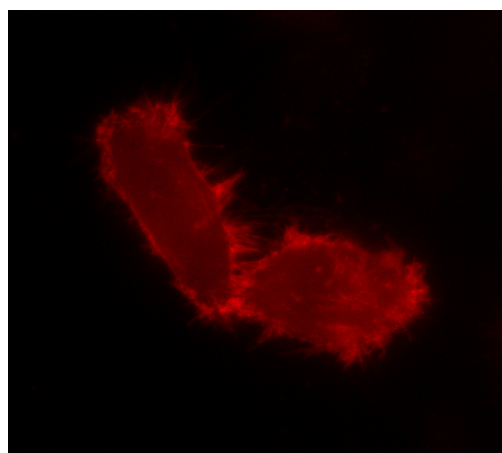
ATGGGCTGCATCAAGAGCAAGCGCAAGGACAACCTGAACGACGACG
GCGTGGACATGGATCCCATGGTGAAGTGTGATCGCTAAACAAATGAC
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 GTCGAAGGCGATGGAAAAGGAAAGCCTTACGAGGGAGAGCAGACAG
 TAAAGCTCACTGTACCAAGGTTGACCTCTGCCATTTGCTTGGGA
 TATTTATCACCACAGCTTCAGTACGGAAGCATACCATTACCAAG
 TACCCTGAAGACATCCCTGATTATTTCAAGCAGTCATTCCCTGAGG
 GATATACATGGGAGAGGAGCATGAACTTTGAAGATGGTGCAGTGTG
 TACTGTCAGCAATGATTCCAGCATCCAAGGCAACTGTTTCATCTAC
 AATGTCAAATCTCTGGTGAAGACTTTCTCCCAATGGACCTGTTA
 TGCAGAAGAAGACACAGGGCTGGGAACCCAGCACTGAGCGTCTCTT
 TGCACGAGATGGAATGCTGATAGGAAACGATTATATGGCTCTGAAG
 TTGGAAGGAGGTGGTCACTATTTGTGTGAATTTAAATCTACTTACA
 AGGCAAAGAAGCCTGTGAGGATGCCAGGGCGCCACGAGATTGACCG
 CAACTGGATGTAACCAAGTCACAACAGGGATTACACATCTGTTGAG
 CAGTGTGAAATAGCCATTGCACGCCACTCTTTGCTCGGT

(Underlined sequences in red are from Lyn.)

2) Amino acid sequence

MGCISKSRKDNLNDDGVDMDPMVSVIAKQMTYKVYMSGTVNGHYFE
 VEGDGKGPYEGEQTVKLTVTKGGPLPFAWDILSPQLQYGSIPFTK
 YPEDIPDYFKQSFPEGYTWERSMNFEDGAVCTVSNDSIQGNCFIY
 NVKISGENFPNGPVMQKKTGGWEPSTERLRFARDGMLIGNDYMALK
 LEGGGHYLCEFKSTYKAKKPVMPGRHEIDRKL DVTSHNRDYSVE
 QCEIAIARHSLLG

(Underlined sequences in red are from Lyn.)



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

CoralHue[®] mKeima-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[®] mKeima-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@mbl.co.jp

Patent No. JP5147915, US8420781 and EP2314682