

Fluorescent Protein Cloning Vector

CoralHue[®]

monomeric Kusabira-Orange 1 (pmKO1-S1)

Code No.
AM-V0051M

Quantity
20 µg

BACKGROUND: The plasmid DNA encodes a monomeric version of the fluorescent protein *CoralHue*[®] Kusabira-Orange (KO). KO has been cloned from the stony coral, whose Japanese name is “Kusabira-ishi”. It absorbs light maximally at 548 nm and emits orange light at 561 nm. Wild-type *CoralHue*[®] KO rapidly matures to form a brightly fluorescent dimer. *CoralHue*[®] KO has been carefully engineered to form a monomer, *CoralHue*[®] monomeric Kusabira Orange 1 (mKO1) that maintains the brilliance and pH stability of the parent protein. *CoralHue*[®] mKO1 can be used to label proteins or subcellular structures or for FRET analysis.

SOURCE: The *CoralHue*[®] Kusabira-Orange gene was cloned from stony coral (*Fungia concinna*)

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

PURITY: A260/A280 > 1.5

STORAGE: Stored at -20°C.

SEQUENCE LANDMARKS:

CoralHue[®] mKO1 gene (including stop codon): bases 2264-2920
Ampicillin resistance gene: bases 200-1059
ColE1 origin: bases 1062-2002

INTENDED USE:

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

REFERENCE:

1) Karasawa, S., et al., *Biochem J.* **381**, 307-312 (2004)

Gen Bank:

Accession Numbers: AB128819, AB128821

NOTICES:

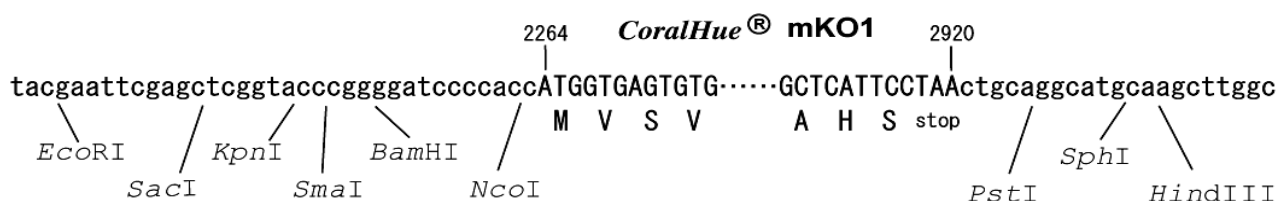
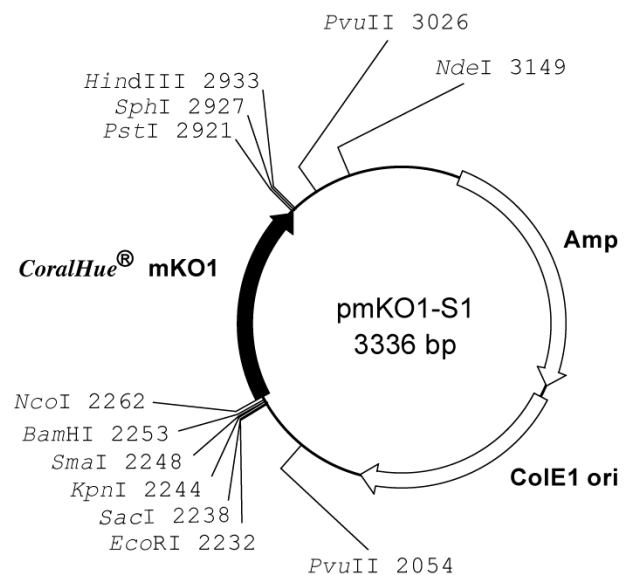
- 1) pmKO1-S1 is not expression vector. When *CoralHue*[®] mKO1 is expressed in any cells, the cDNA must be transferred to appropriate expression vectors by your own.
- 2) Val is inserted to second amino acid of *CoralHue*[®] mKO1 to form kozak sequence. (The corresponding nucleotide sequence is GTG)

RELATED PRODUCTS:

AM-V0051M *CoralHue*[®] monomeric Kusabira-Orange 1 (pmKO1-S1)
AM-V0052M *CoralHue*[®] monomeric Kusabira-Orange 1 (pmKO1-MC1)
AM-V0053M *CoralHue*[®] monomeric Kusabira-Orange 1 (pmKO1-MN1)
M104-3M Anti-monomeric Kusabira-Orange 1 mAb
M105-3M Anti-monomeric Kusabira-Orange 1 mAb

Other related products are also available.

Please visit our website at <http://ruo.mbl.co.jp/>



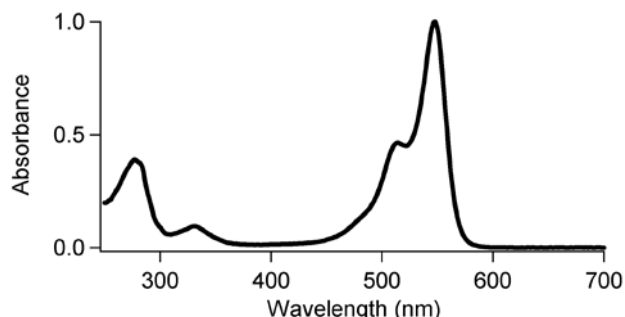
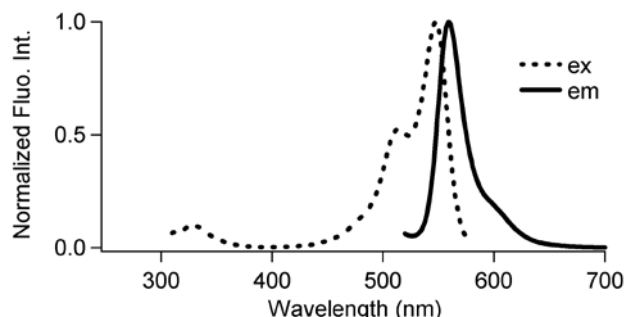
Amalgaam

MBL MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.

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CoralHue[®] mKO1: 218 amino acids

	Excit./Emiss.Maxima (nm)	Extinction Coefficient(M-1cm-1)	Fluorescence Quantum Yield	pH sensitivity
mKO1	548/559	51,600 (548 nm)	0.60	pK _a =5.0



CoralHue[®] mKO1

1) DNA sequence

ATGGTGAGTGTGATTAACCCAGAGATGAAGATGAGGTA CTACAT
GGACGGCTCCGTCAATGGGCATGAGTTCACAATTGAAGGTGAAG
GCACAGGCAGACCTTACGAGGGACATCAAGAGATGACACTACGC
GTCACAATGGCCAAGGGCGGCCAATGCCTTTCGCGTTTGACTT
AGTGTACACAGTGTCTGTTACGGCCACAGACCTTTTACTAAAT
ATCCAGAAGAGATACCAGACTATTTCAAACAAGCATTTCCTGAA
GGCCTGTCATGGGAAAGGTCGTTGGAGTTCGAAGATGGTGGGTC
CGCTTCAGTCAGTGCCATATAAGCCTTAGAGGAAACACCTTCT
ACCACAAATCCAAATTTACTGGGGTTAACTTTCCTGCCGATGGT
CCTATCATGCAAAACCAAGTGTGATTGGGAGCCATCAACCGA
GAAAATTACTGCCAGCGACGGAGTTCTGAAGGGTGATGTTACGA
TGACCTAAAATTGAAGGAGCGGCAATCACAAATGCCAATTC
AAGACTACTTACAAGGCGGCAAAAAGATTCTTAAAATGCCAGG
AAGCCATTACATCAGCCATCGCCTCGTCAGGAAAACCGAAGGCA
ACATTACTGAGCTGGTAGAAGATGCAGTAGCTCATTCC

2) Amino acid sequence

MVSVIKPEMKMRYMDGSVNGHEFTIEGEGTGRPYEGHQEMTLR
VTMAKGGPMPFAFDLVSHVFCYGHRPFTKYPEEIPDYFKQAFPE
GLSWERSLEFEDGGSASVSAHISLRGNTFYHKSFTGVNFPADG
PIMQNGSVDWEPSTEKITASDGVLKGDVMTYKLEGGGNHKCQF
KTTYKAAKKILKMPGSHYISHRLVRKTEGNI TELVEDAVAHS



CoralHue[®] mKO1 expression in HeLa cells.

CoralHue[®] mKO 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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