MBL International Corporation

life.science.discovery.

Fluorescent Proteins and Antibodies

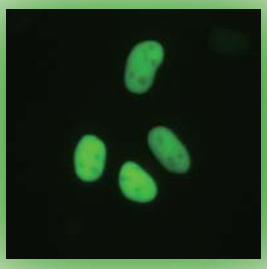
For research use only

Fluorescent Proteins

- CoralHue® Azami-Green
- CoralHue® Dronpa-Green
- CoralHue® Kaede
- CoralHue® Keima-Red
- CoralHue® Kikume Green-Red
- CoralHue® Kusabira-Orange
- CoralHue® Midoriishi-Cyan

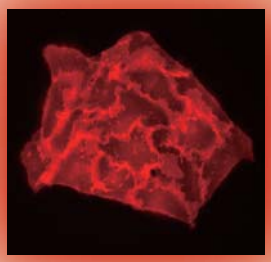
Fluorescent Protein Antibodies

CoralHue® Azami-Green



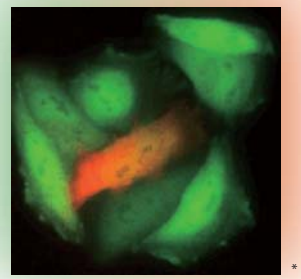
Bright Green!

CoralHue® Keima-Red



Large Stokes Shift!

CoralHue® Kaede



Photoconverting! *

CoralHue® Dronpa-Green

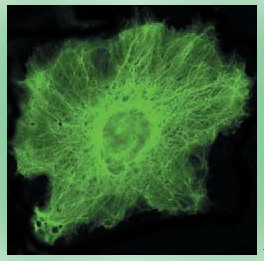
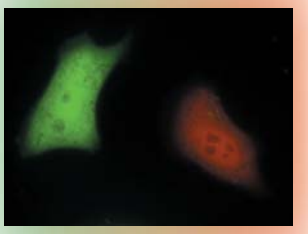


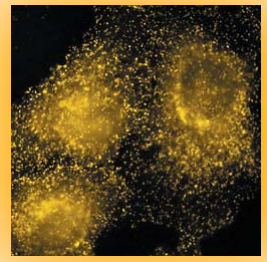
Photo-Activation! **

CoralHue® Kikume Green-Red



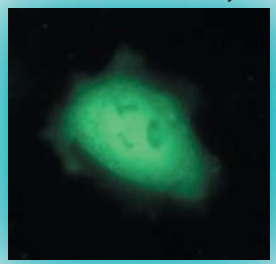
Photoconverting!

CoralHue® Kusabira-Orange



Bright Orange! **

CoralHue® Midoriishi-Cyan



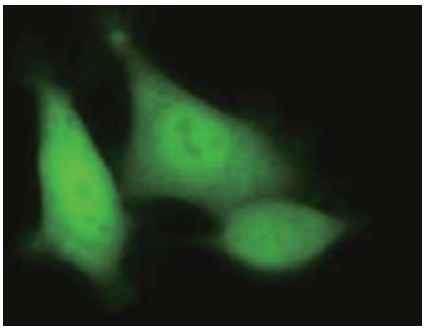
Bright Cyan!

* Photo provided courtesy of Dr. Miyawaki, RIKEN Institute, Japan

**Photos provided courtesy of Dr. Michael Davidson, National High Magnetic Field Laboratory, The University of Florida.

CoralHue® Azami-Green

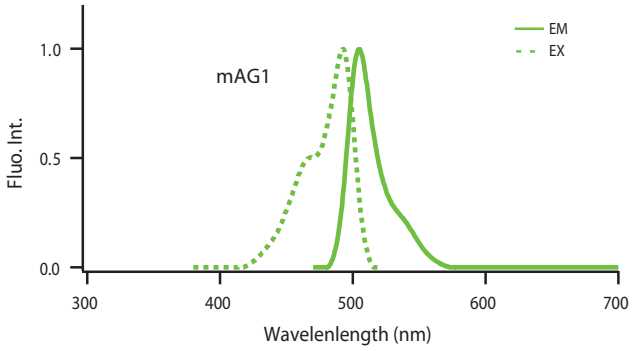
CoralHue® Azami-Green is derived fromthe stony coral whose Japanese name is "Azami-Sango". The CoralHue® Azami-Green (AG) fluorescent protein absorbs lightmaximally at 492 nm and emits green light at 505 nm. AG is stable in both acidic and basic conditions and does not show a significant loss of signal, giving it an advantage over other fluorescent proteins such as GFP. AG also matures rapidly to form tetramers that are highly fl uorescent. This allows AG to be used to identify cells or to report gene expression without problems stemming from protein aggregation. AG has also been engineered as a monomeric fl uorescent protein which allows AG to be used in protein fusion and subcellular structure studies. AG's tight tetramers and monomeric form give AG an advantage over GFP, whose oligomeric form limits GFP to cell labeling.

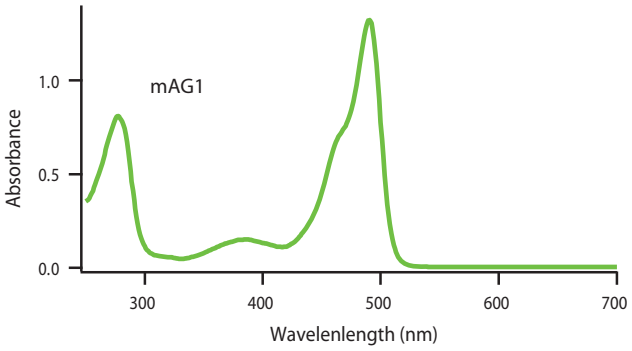


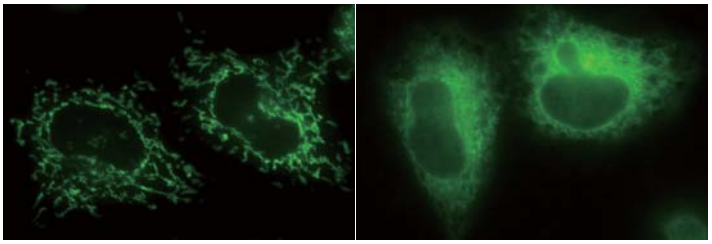
CoralHue® mAG1 expression in HeLa cells

AG has been engineered to provide several humanized, monomeric forms of the Azami-Green fluorescent protein which are useful in cases where monomers are preferred over tetramers. CoralHue® Azami-Green is available in several different plasmids, including expression plasmids, which can help to customize your research. AG is available as a cDNA plasmid which can be manually inserted into a plasmid in order to tag particular proteins of interest. AG is also available in plasmids suitable to construct C-terminal or N-terminal fusion proteins. Finally AG is available in several targeted expression plasmids to label the endoplasmic reticulum, the nucleoplasm, the mitochondria, or the plasma membrane.

	Excit. /Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivit y
mAG 1	492 / 505	55,500 (492 nm)	0.74	pK a = 5.8

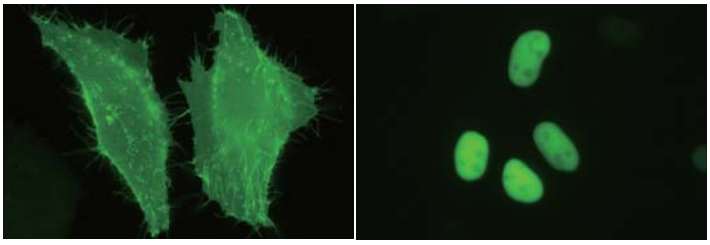






CoralHue® mAG1 Mitochondria

Endoplasmic reticulum



Plasma Membrane

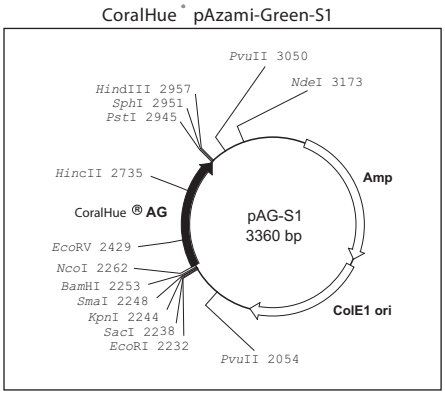
Nucleoplasm

References
Shaner, N.C., et. al. , (2005) Nat. Methods. 2, 905-909. Review.
Karasawa, S., et. al. , (2003) J. Biol. Chem. 278 , 34167-34171.

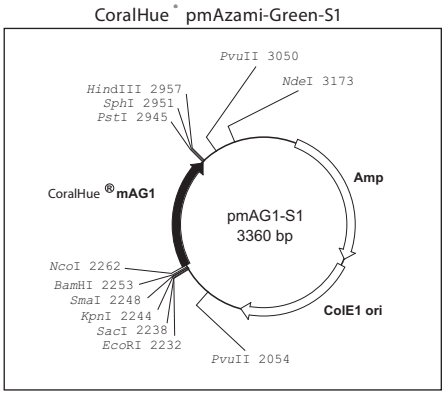
For more information, go to www.mblintl.com

Vector

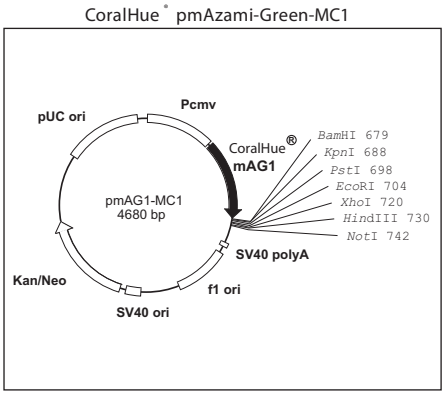
CoralHue® pAzami-Green-S1



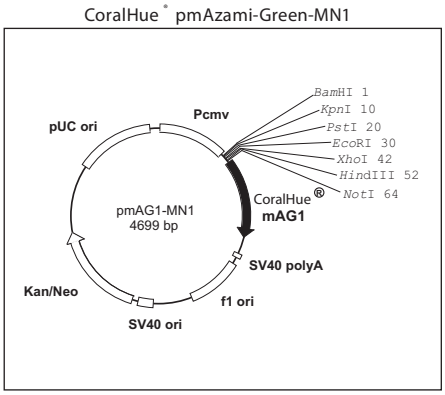
CoralHue® pmAzami-Green-S1



CoralHue® pmAzami-Green-MC1



CoralHue® pmAzami-Green-MN1



CoralHue® Azami-Green Fluorescent Proteins		
Code No.	Product	Size
AM-V0021	CoralHue® Azami-Green (AG-S1)	20 µg
AM-V0031	CoralHue® Monomeric Azami-Green (mAG1-S1)	20 µg
AM-V0032	CoralHue® Monomeric Azami-Green (pmAG1-MC1)	20 µg
AM-V0033	CoralHue® Monomeric Azami-Green (pmAG1-MN1)	20 µg
AM-V0034	CoralHue® Humanized Monomeric Azami-Green (phmAG1-S1)	20 µg
AM-V0035	CoralHue® Humanized Monomeric Azami-Green (phmAG1-MC1)	20 µg
AM-V0036	CoralHue® Humanized Monomeric Azami-Green (phmAG1-MN1)	20 µg
AM-V0039	CoralHue® Humanized Monomeric Azami-Green (phmAG1-MCLinker)	20 µg
AM-V0030	CoralHue® Humanized Monomeric Azami-Green (phmAG1-MNLinker)	20 µg
AM-V0201	CoralHue® Mitochondria-targeted mAG1 Expression Plasmid (pMT-mAG1)	20 µg
AM-V0202	CoralHue® ER-targeted mAG1 Expression Plasmid (pER-mAG1)	20 µg
AM-V0203	CoralHue® Plasma Membrane-targeted mAG1 Expression Plasmid (pPM-mAG1)	20 µg
AM-V0214	CoralHue® Nucleoplasm-targeted AG Expression Plasmid (pNP-AG)	20 µg

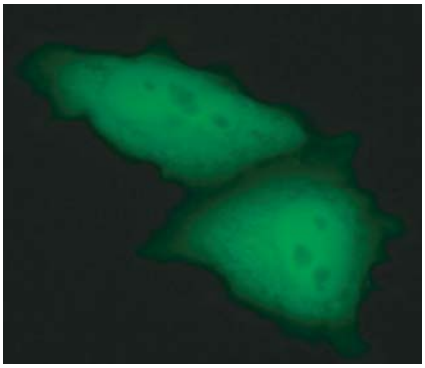
Anti- CoralHue® Azami-Green Antibodies						
Code No.	Product	Clone	Isotype	Size	Applications	
M102-3	Anti- CoralHue® Azami Green Monoclonal Antibody	2F11	mouse IgG1κ	100 µg	WB	
M102-3S	Anti- CoralHue® Azami Green Monoclonal Antibody (Trial Size)	2F11	mouse IgG1κ	10 µL	WB	
M103-3	Anti- CoralHue® Azami Green Monoclonal Antibody	3D10	mouse IgG2aκ	100 µg	IPP	
M103-3S	Anti- CoralHue® Azami Green Monoclonal Antibody (Trial Size)	3D10	mouse IgG2aκ	10 µL	IPP	
PM011	Anti- CoralHue® Azami Green Polyclonal Antibody	polyclonal	rabbit IgG	500 µg	WB	
PM011S	Anti- CoralHue® Azami Green Polyclonal Antibody (Trial Size)	polyclonal	rabbit IgG	10 µL	WB	

Application; WB: Western blotting, IPP: Immunoprecipitation

CoralHue® Dronpa-Green

CoralHue® Dronpa-Green is a monomeric fluorescent protein that has a unique ability to turn on and off its green fluorescence. When subjected to excitation at 400 nm, Dronpa-Green displays a bright green fluorescence which is equivally bright as EGFP. When subjected to excitation at 490nm, Dronpa-green's bright green fluorescence is "switched off". Then these bleached proteins can be "switched on" again by exciting the protein at 400nm. This photoconversion can be repeated endlessly, without compromising the brightness of the protein. This unique property of Dronpa-Green is useful for measuring the dynamics of molecular mobility (e.g. diffusion, transport, etc.) of f uorescently labeled molecules in membranes or in living cells.

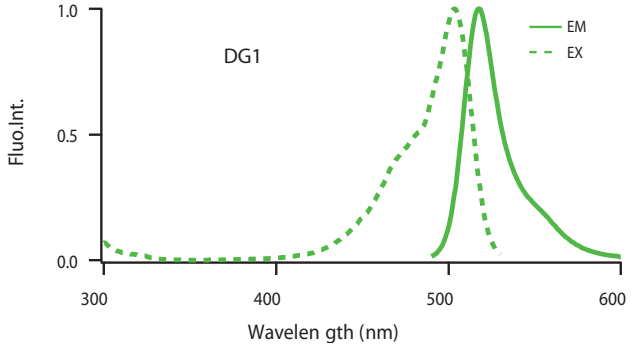
CoralHue® Dronpa-Green is available as several different expression plasmids. Dronpa-Green expression plasmids allow for proteins of interest to be labeled by Dronpa-Green at either their C-terminus or N-terminus. Dronpa-Green is also available as a cDNA plasmid which allows Dronpa-Green to be incorporated into an expression plasmid of choice at several different restriction sites.

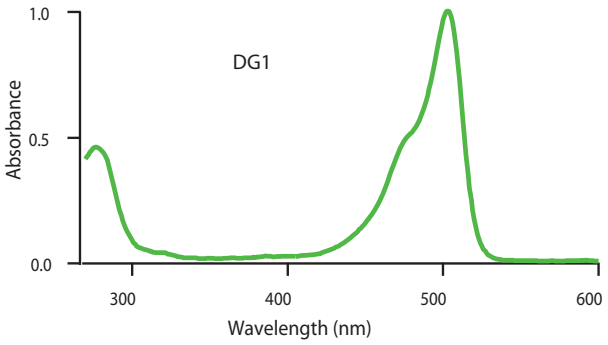


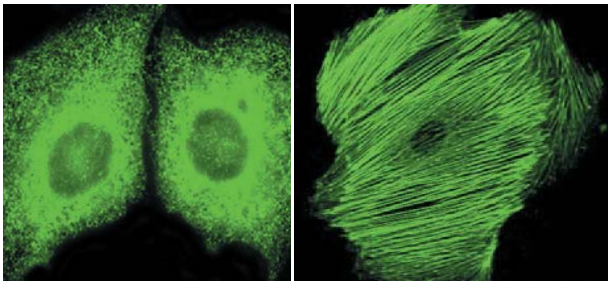
CoralHue® DG1 expression in HeLa cells

FUN FACT: Dronpa,after "dron" a ninja term for vanishing, and "pa" which stands for photoactivation.

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
DG1	503 / 518	95,000 (503 nm)	0.85	pKa=5.0





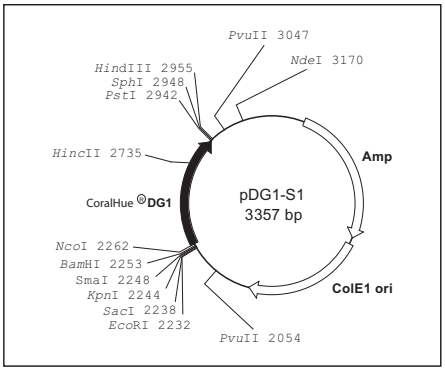


CoralHue® DG1 stained Endoplasmic Reticulum and Actin in HeLa cells.
Photos provided courtesy of Dr. Michael Davidson, National High Magnetic Field Laboratory, The University of Florida.

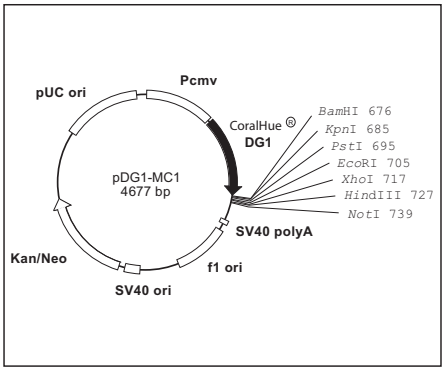
References
Fron, E., et al., (2007) J Am Chem Soc. 129, 4870-4871.
Ando, R., et al., (2007) Biophys J. 92, L97-99.
Ando, R., et al., (2004) Science 306, 1370-1373.
Aramaki, S., and Hatta, K., (2006) Dev. Dyn. 235, 2192-2199.
Dedecker, P., et al., (2006) Biophys. J. 91, 45-47.
Eisenstein, M., (2005) Nature Methods 2, 8-9.
Habuchi, S., et al., (2005) PNAS 102, 9511-9516.
Habuchi, S., et al., (2006) Photochem. Photobiol. Sci. 5, 567-576.
Kurokawa, K., et al., (2005) Mol. Biol. Cell 16, 4294-4303.
Sauer, M., (2005) PNAS 102, 9433-9434.
Stiel, A.C., et al., (2007) Biochem. J. 402, 35-42.
Wilmann, P.G., et al., (2006) J. Mol. Biol. 364, 213-214.

Vector

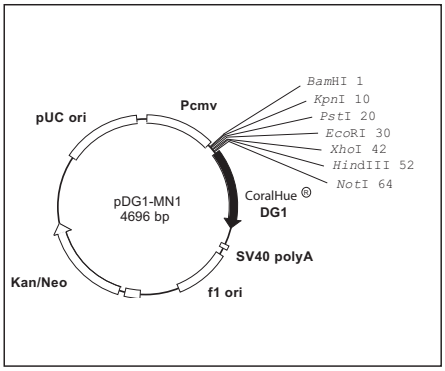
CoralHue® pDronpa-Green-S1



CoralHue® pDronpa-Green-MC1



CoralHue® pDronpa-Green-MN1



CoralHue® Dronpa-Green Fluorescent Proteins		
Code No.	Product	Size
AM-V0071	CoralHue® Dronpa-Green (pDG1-S1)	20 µg
AM-V0072	CoralHue® Dronpa-Green (pDG1-MC1)	20 µg
AM-V0073	CoralHue® Dronpa-Green (pDG1-MN1)	20 µg
AM-V0131	CoralHue® Dronpa-Green3 (pDG3-S1)	20 µg

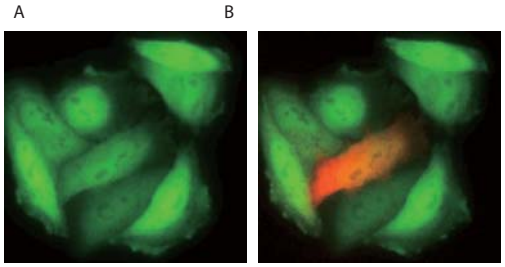
Anti- CoralHue® Dronpa-Green Antibodies					
Code No.	Product	Clone	Isotype	Size	Applications
M117-3	Anti- CoralHue® Dronpa Green Monoclonal Antibody	4D12	mouse IgG2a	100 µL	WB
M118-3	Anti- CoralHue® Dronpa Green Monoclonal Antibody	2F6	mouse IgG2b	100 µg	IPP

Application; WB: Western blotting, IPP: Immunoprecipitation

CoralHue® Kaede

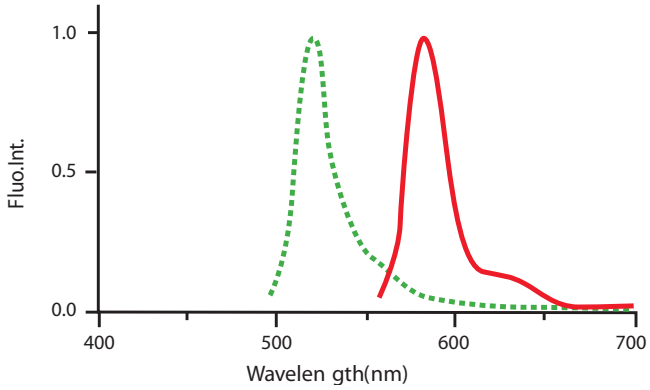
CoralHue® Kaede is a unique fluorescent protein that has the ability to irreversibly convert from bright green flurescence to bright red fluorescence. This photoconversion can be activated by irradiating the protein with UV or violet light (350-410 nm). Kaede's red fluorescence is comparable in intensity to the protein's green fluorescence and is also stable under usual aerobic conditions, unlike many other photoconverting proteins. The irreversible photoconversion of Kaede provides a simple and powerful technique for regional optical marking.

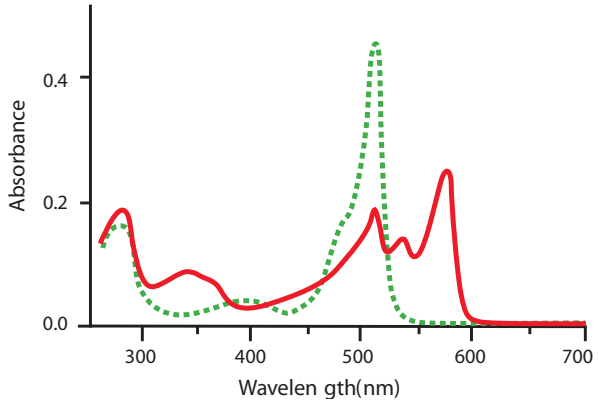
CoralHue® Kaede is available as several different vectors which allow researchers to tag their protein of interest either at the C-terminus or N-terminus. Kaede is also available as a cDNA vector which can be inserted into a plasmid using several different restriction sites.

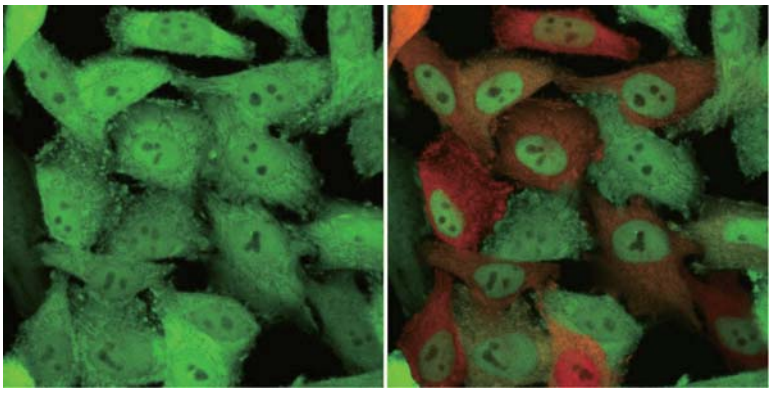


Kaede expression in HeLa cells
A;Before UV irradiation, B;After UV irradiation *

	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
Green	508 / 518	98,800 (508 nm)	0.88	pKa=5.6
Red	572 / 580	60,400 (572 nm)	0.33	pKa=5.6



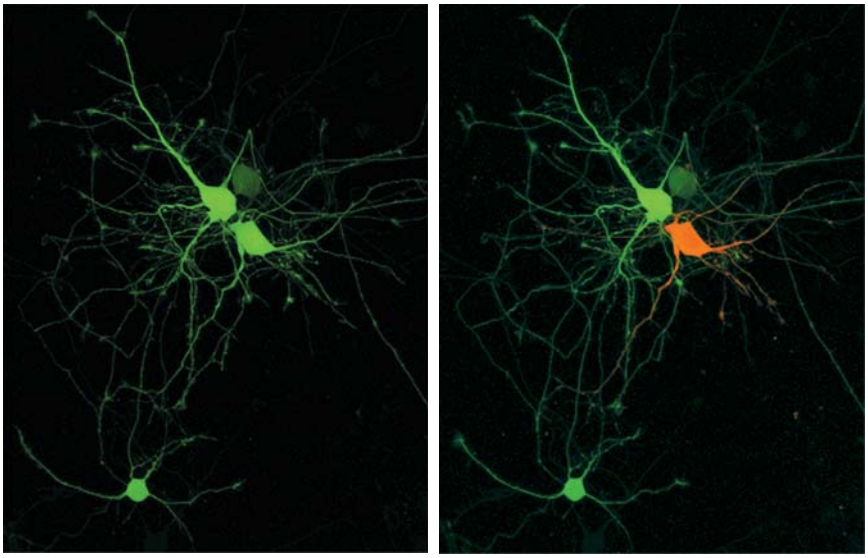




HeLa cells before and after Kaede photoconversion *

* Photos provided courtesy of Dr. Miyawaki, RIKEN Institute, Japan

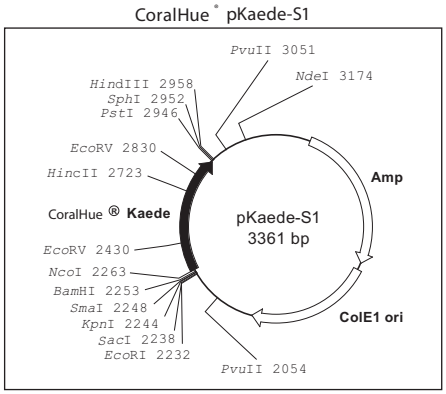
References
Stark, D.A., et al., (2007) Dev. Dyn. 236, 1583-1594.
Hatta, K., et al., (2006) Nat. Protoc. 1, 960-967.
Scott, E.K., et al., (2007) Nat. Methods. 4, 323-326.
Davison, J.M., et al., (2007) Dev. Biol. 304, 811-824.
Pisharath, H., et al., (2007) Mech. Dev. 124, 218-229.
Ando, R., et al., (2002) PNAS 99, 12651-12656.
Arimura, S., et al., (2004) PNAS 101, 7805-7808.
Dittrich, P.S., et al., (2005) Biophysical J. 89, 3446-3455.
Hosoi, H., et al., (2006) J. Phys. Chem. B. 110, 22853-22860.
Kimura, Y., et al., (2005) J. Neurosci. 26, 5684-5697.
Kurokawa, K., et al., (2005) Mol. Biol. Cell 16, 4294-4303.
Lippincott-Schwartz, J., et al., (2003) Imaging in Cell Biology , S7-S14.
Melton, L., et al., (2005) NATURE 437, 775-779.
Miyawaki, A., (2002) Cell Structure and Function 27, 343-347.
Miyawaki, A., (2004) Nature Biotechnology 22, 1374-1376.
Mizuno, H., et al., (2003) Molecular Cell 12, 1051-1058.
Mutoh, T., et al., (2006) Exp. Neurol. 200, 430-437.
Raab-Graham, K.F., et al., (2006) Science 314, 144-148.
Sato, T., et al., (2006) Genesis 44, 136-142.
Schafer, S.P., et al., (2006) Microsc. Res. Tech. 69, 210-219.
Tsutsui, H., et al., (2005) EMBO reports 6, 1-6.
Wiedenmann, J., et al., (2004) PNAS 101, 15905-15910.



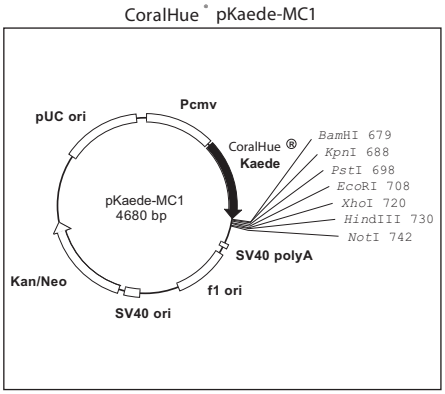
Neurons transfected with Kaede (before and after photoconversion) *

Vector

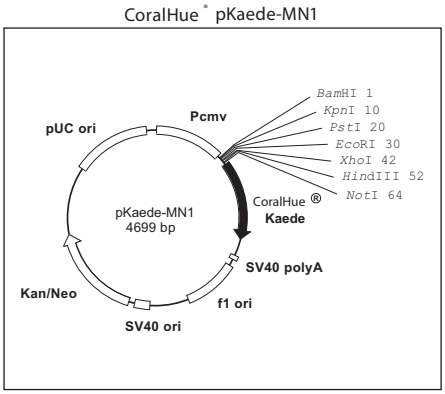
CoralHue® pKaede-S1



CoralHue® pKaede-MC1



CoralHue® pKaede-MN1



CoralHue® Kaede Fluorescent Proteins		
Code No.	Product	Size
AM-V0011	CoralHue® Kaede (pKaede-S1)	20 µg
AM-V0012	CoralHue® Kaede (pKaede-MC1)	20 µg
AM-V0013	CoralHue® Kaede (pKaede-MN1)	20 µg

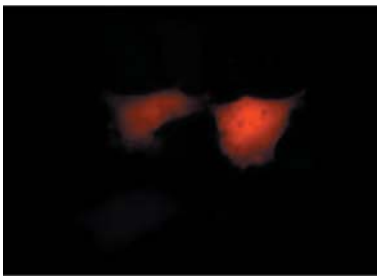
Anti- CoralHue® Kaede Antibodies					
Code No.	Product	Clone	Isotype	Size	Applications
M106-3	Anti- CoralHue® Kaede Monoclonal Antibody	2F4	mouse IgG1κ	100µg	IPP
M106-3S	Anti- CoralHue® Kaede Monoclonal Antibody(Trial Size)	2F4	mouse IgG1κ	10µL	IPP
M125-3	Anti- CoralHue® Kaede Monoclonal Antibody	3B1	mouse IgG1	100µL	WB
PM012	Anti- CoralHue® Kaede Polyclonal Antibody	polyclonal	rabbit IgG	500µL	IPP
PM012S	Anti- CoralHue® Kaede Polyclonal Antibody(Trial Size)	polyclonal	rabbit IgG	10µL	WB

Application; WB: Western blotting, IPP: Immunoprecipitation

CoralHue® Keima-Red

MBL International's new, exclusive fluorescent proteins, CoralHue® Monomeric and Dimeric Keima-Red, combine bright red fluorescence with the largest commercially available Stokes shift (ex. 440 nm, em. 620 nm), making Keima-Red a superb reporter protein for multicolor fluorescence analyses. Keima-Red is particularly useful when performing dual-color fluorescence cross-correlation spectroscopy (FCCS) because it can be paired with a fluorescent protein with a similar excitation wavelength that has a small Stokes shift. This pairing would allow for simultaneous excitation of the two proteins without interference between the two emissions.

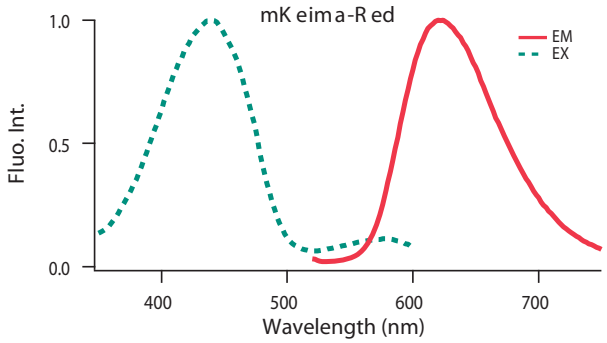
The CoralHue® Keima-Red protein cloning plasmids allow for insertion of cDNA sequences to create protein fusion products between the protein of interest and Keima. One insertion locations is available allowing the target protein to be tagged by Keima at N-terminus. CoralHue® Keima-Red fluorescent protein cloning plasmids create protein fusion products that are useful for tracking protein localization within cells as well as monitoring gene expression. Keima-Red is also now available as target specific constracts which will allow for Keima-Red protein fusion products to be directed to either the mitochondria or the plasma membrane.

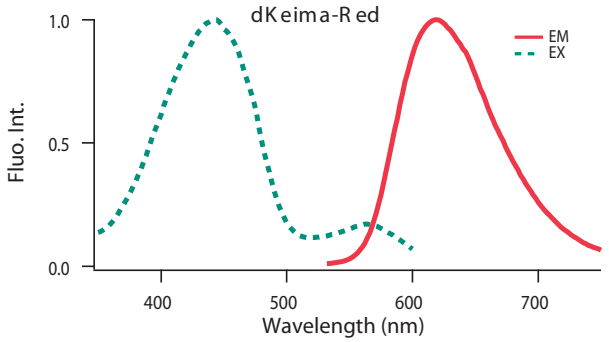


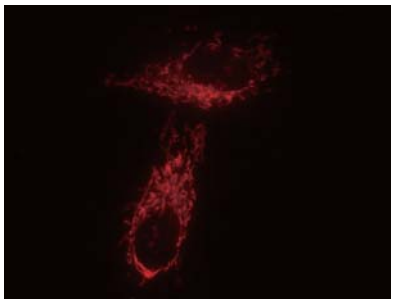
CoralHue® Keima-Red expression in HeLa cells

FUN FACT: Keima means "knight" of Japanese chess(shogi). The protein named so for its "jumping" Stokes shift.

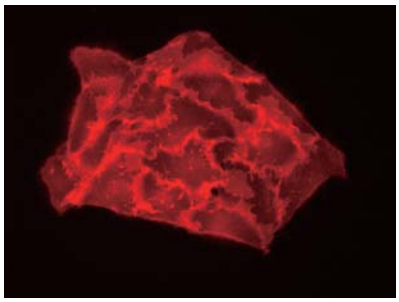
	Excit./Emiss.Maxima (nm)	Extinction Coefficient ($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
dKeima-Red	440 / 616	24,600 (at 440 nm)	0.31	pKa=6.5
mKeima-Red	440 / 620	14,400 (at 440 nm)	0.24	pKa=6.5





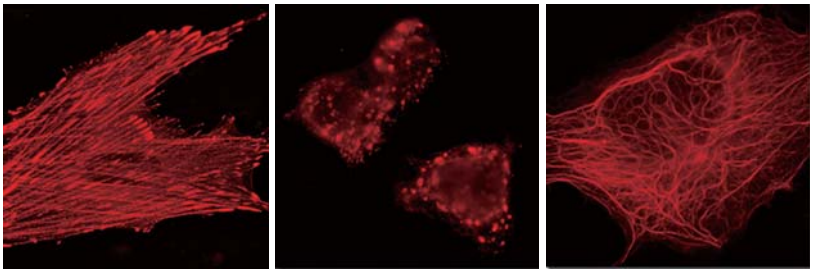


CoralHue® MT-Keima-Red expression in HeLa cells



CoralHue® PM-Keima-Red expression in HeLa cells

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

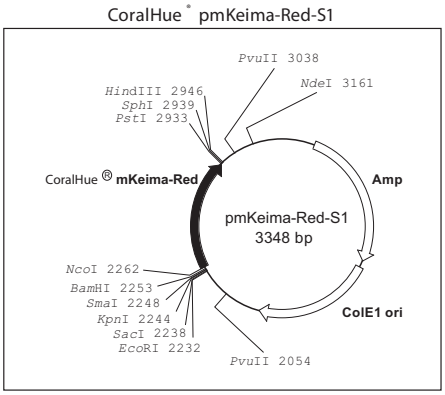


CoralHue® mKeima-Red
Zyxin　　Golgi　　Keratin

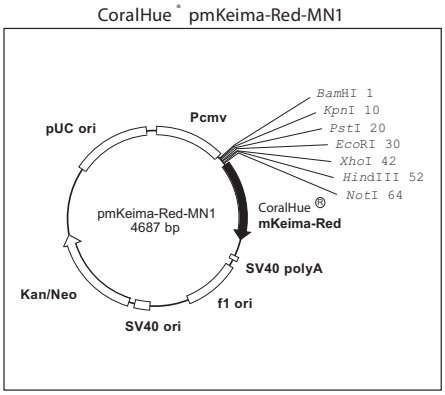
Photos provided courtesy of Dr. Michael Davidson, National High Magnetic Field Laboratory, The University of Florida.

Vector

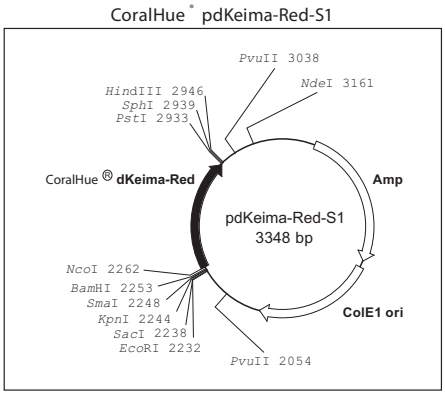
CoralHue® pmKeima-Red-S1



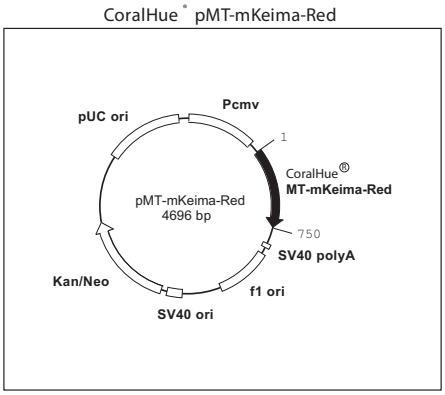
CoralHue® pmKeima-Red-MN1



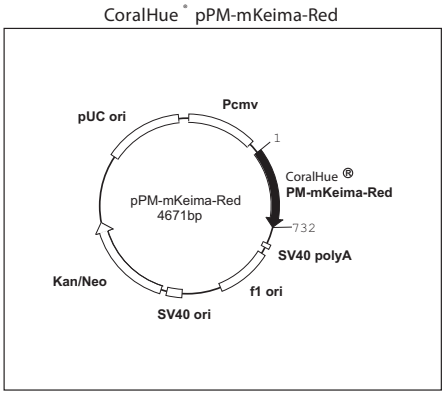
CoralHue® pdKeima-Red-S1



CoralHue® pMT-mKeima-Red



CoralHue® pPM-mKeima-Red



CoralHue® Keima-Red Fluorescent Proteins		
Code No.	Product	Size
AM-V0091	CoralHue® Monomeric Keima-Red (pmKeima-Red-S1)	20 µg
AM-V0093	CoralHue® Monomeric Keima-Red (pmKeima-Red-MN1)	20 µg
AM-V0101	CoralHue® Dimeric Keima-Red (pdKeima-Red-S1)	20 µg
AM-V0121	CoralHue® Dimeric Keima570 (pdKeima570-S1)	20 µg
AM-V0251	CoralHue® Mitochondria-targeted mKeima-Red Expression Plasmid (pMT-mKeima-Red)	20 µg
AM-V0253	CoralHue® Plasma Membrane-targeted mKeima-Red Expression Plasmid (pPM-mKeima-Red)	20 µg

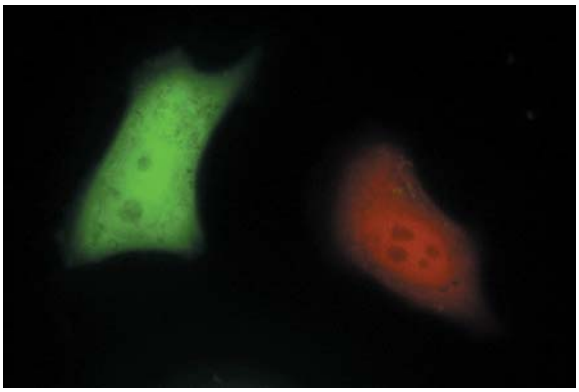
Anti- CoralHue® Keima-Red Antibodies						
Code No.	Product	Clone	Isotype	Size		Applications
M126-3	Anti- CoralHue® Keima-Red Monoclonal Antibody	2F7	mouse IgG2a	100	µg	WB
M127-3	Anti- CoralHue® Keima-Red Monoclonal Antibody	3C9	mouse IgG1	100	µg	IPP

Application;　WB: Western blotting, IPP: Immunoprecipitation

CoralHue® Kikume Green-Red

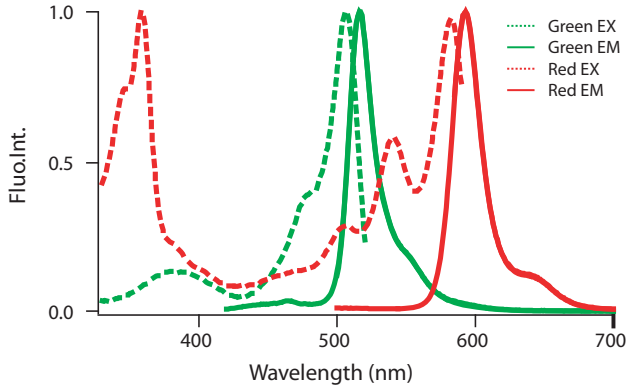
CoralHue® Kikume Green-Red (KikGR) is a photoconverting protein which has the capability to irreversibly convert from green to red fluorescence when subjected to UV or violet light. The excitation lights used to elicit red or green fluorescence do not induce the photoconversion. This provides a simple and powerful technique for regional optical marking. KikGR's red and green fluorescence can be activated in vivo and is several-fold brighter than Kaede's green and red fluorescence.

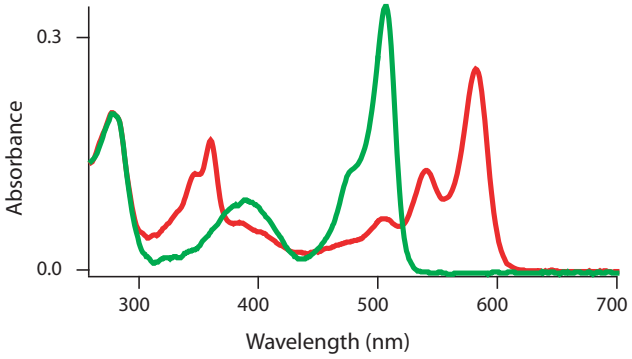
CoralHue® KikGR is available as several different plasmids allowing for several different insertion sites, including the N-terminus and the C-terminus of a protein of interest. CoralHue® KikGR is now also available as a humanized plasmid which can be expressed in mammalian cells. CoralHue® KikGR's ability to photoconvert from green to red combined with the many forms of the protein available make KikGR the perfect fluorescent protein for regional optical marking.

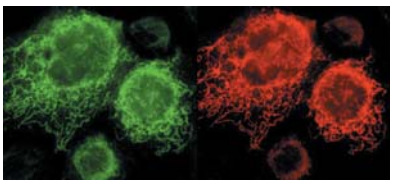


CoralHue® hKikGR1 expression in HeLa cells.
The fluorescence of hKikGR1 irradiated with UV is red.
Untreated hKikGR emits green fluorescence.

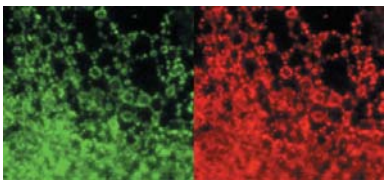
	Excit./Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH Sensitivity
Green	507 / 517	53,700 (507 nm)	0.70	pKa=7.8
Red	583 / 593	35,100 (583 nm)	0.65	pKa=5.5







CoralHue® KikGR1



Mitochondria

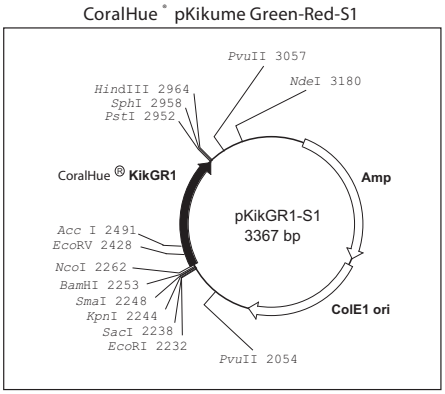
Endoplasmic reticulum

The fluorescence of KikGR1 irradiated with UV is red. Untreated KikGR emits green fluorescence.
Photos provided courtesy of Dr. Michael Davidson, National High Magnetic Field Laboratory, The University of Florida.

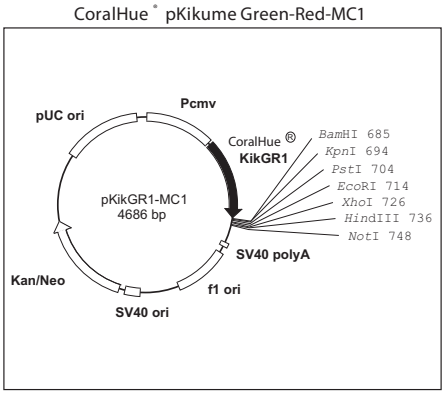
Reference
Stark, D.A., et. al. , (2007) Dev Dyn. 236, 1583-1594.
Tsutsui, H., et. al. , (2005) EMBO reports 6, 1-6.

Vector

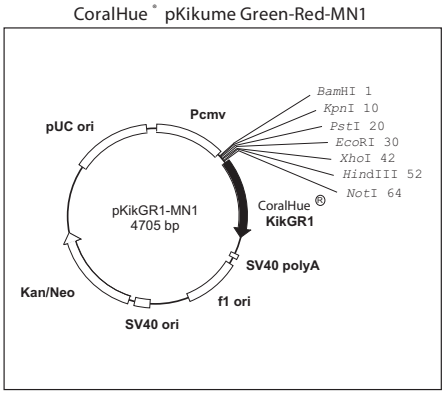
CoralHue® pKikume Green-Red-S1



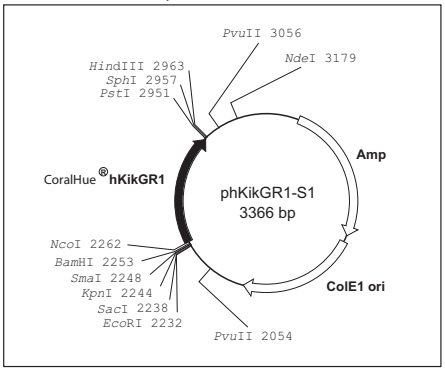
CoralHue® pKikume Green-Red-MC1



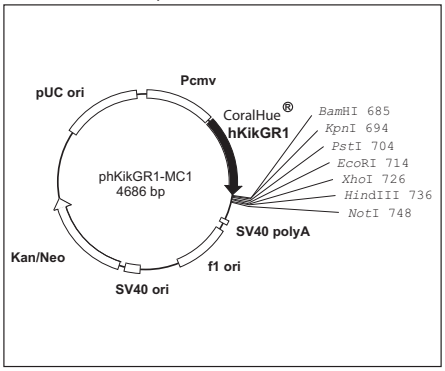
CoralHue® pKikume Green-Red-MN1



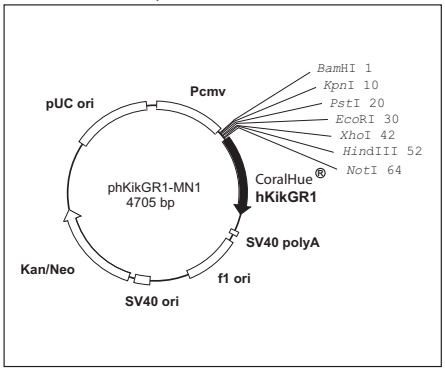
CoralHue® phKikume Green-Red-S1



CoralHue® phKikume Green-Red-MC1



CoralHue® phKikume Green-Red-MN1



CoralHue® Kikume Green-Red Fluorescent Proteins		
Code No.	Product	Size
AM-V0081	CoralHue® Kikume Green-Red (pKikGR1-S1)	20 µg
AM-V0082	CoralHue® Kikume Green-Red (pKikGR1-MC1)	20 µg
AM-V0083	CoralHue® Kikume Green-Red (pKikGR1-MN1)	20 µg
AM-V0084	CoralHue® Humanized Kikume Green-Red (phKikGR1-S1)	20 µg
AM-V0085	CoralHue® Humanized Kikume Green-Red (phKikGR1-MC1)	20 µg
AM-V0086	CoralHue® Humanized Kikume Green-Red (phKikGR1-MN1)	20 µg
AM-V0089	CoralHue® Humanized Kikume Green-Red (phKikGR1-MCLinker)	20 µg
AM-V0080	CoralHue® Humanized Kikume Green-Red (phKikGR1-MNLinker)	20 µg

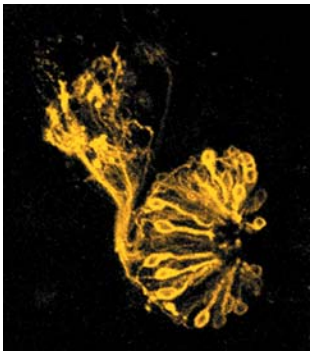
Anti- CoralHue® Kikume Green-Red Antibodies					
Code No.	Product	Clone	Isotype	Size	Applications
M128-3	Anti-CoralHue® Kikume Green-Red/KikGR Monoclonal Antibody	5B3	mouse IgG2b	100 µg	WB
M129-3	Anti-CoralHue® Kikume Green-Red/KikGR Monoclonal Antibody	2D3	mouse IgG2b	100 µg	IPP

Application; WB: Western blotting, IPP: Immunoprecipitation

CoralHue® Kusabira-Orange

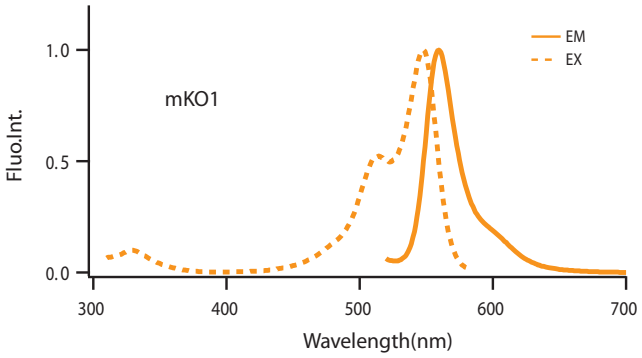
CoralHue® Kusabira-Orange is a fluorescent protein that was derived from the stony coral whose Japanese name is "Kusabira-ishi". Kusabira-Orange absorbs light maximally at 548 nm and emits orange light at 561 nm. Wild-Type Kusabira-Orange rapidly matures to form a fluorescent dimeric complex which can be used to mark cells or to report gene expression without problems stemming from protein aggregation. CoralHue® Kusabira-Orange has also been engineered as monomeric and humanized forms.

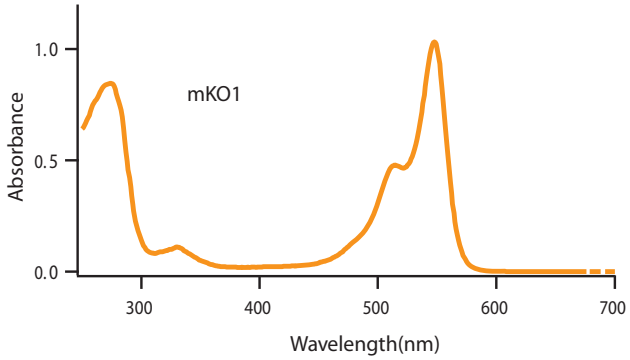
CoralHue® Kusabira-Orange is available as plasmids which are fusion to the C-terminus or the N-terminus of your proteins of interest. Kusabira-Orange is available as several targeted expression plasmids that are specific to the endoplasmic reticulum, the nucleoplasm, and the plasma membrane, and the mitochondria.

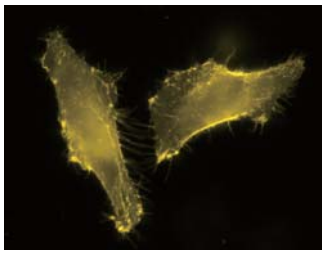


CoralHue® KO1 expressed in olfactory neurons in fish.
Photo provided courtesy of Dr. Yoshihara, RIKEN Institute, Japan.

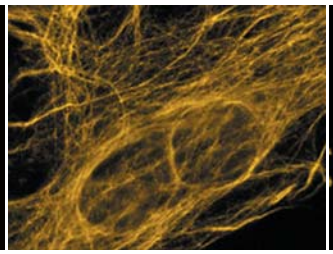
	Excit. /Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
mKO1	548 / 559	51,600 (548 nm)	0.6	pKa = 5.0



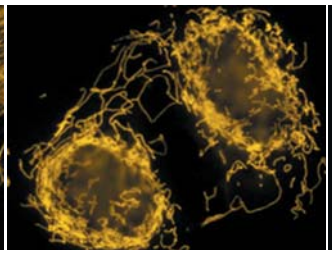




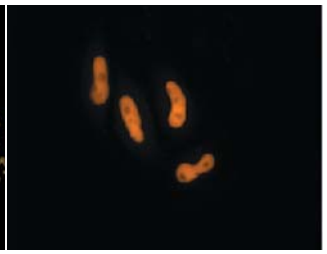
Kusabira Orange
Plasma Membrane



Kusabira Orange
Vimentin *



Kusabira Orange
Mitochondria *



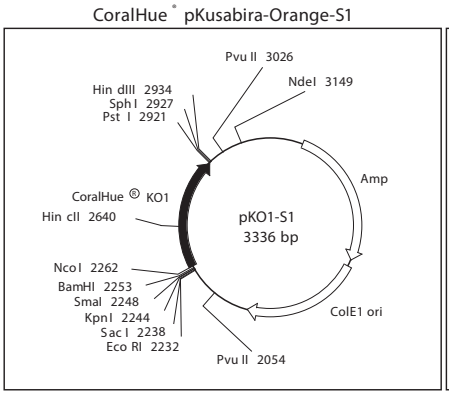
Kusabira Orange
Nucleoplasm

* Photo provided courtesy of Dr. Michael W. Davidson, The National High Magnetic Field Laboratory, The Florida State University

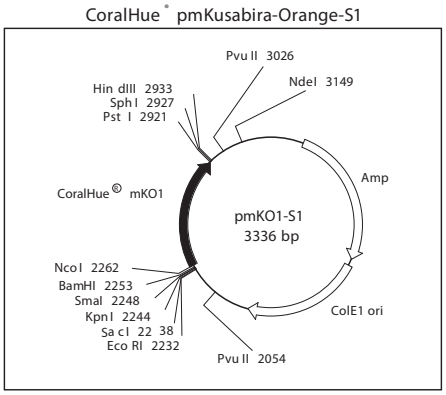
References
Niwa, H., et. al. , (2005) Cell 123 , 917-929.
Shaner, N.C., et. al. , (2005) Nat. Methods. 2, 905-909. Review.
Karasawa, S., et. al. , (2004) Biochem. J. 381 , 307-312.
Ishida, A., et. al. , (2005) Res. Bull. Aichi Agric. Res. Ctr. 37, 141-146.

Vector

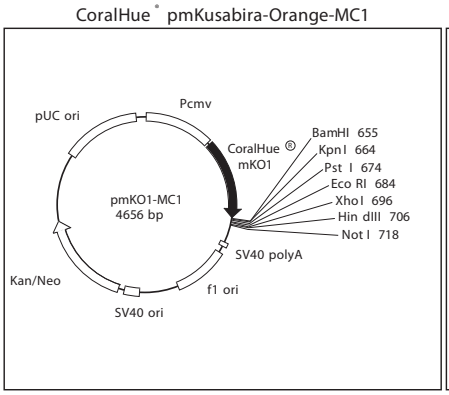
CoralHue® pKusabira-Orange-S1



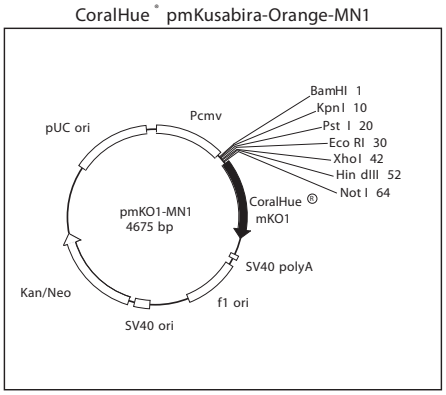
CoralHue® pmKusabira-Orange-S1



CoralHue® pmKusabira-Orange-MC1



CoralHue® pmKusabira-Orange-MN1



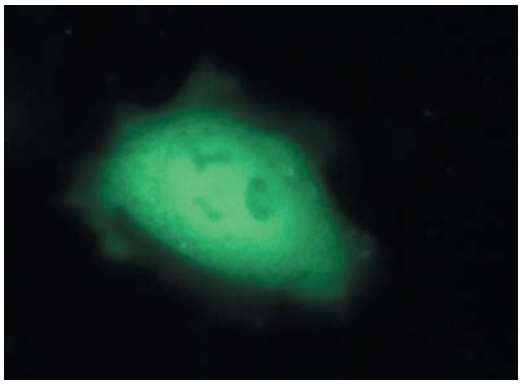
CoralHue® Kusabira-Orange Fluorescent Proteins		
Code No.	Product	Size
AM-V0041	CoralHue® Kusabira-Orange (pKO1-S1)	20 µg
AM-V0051	CoralHue® Monomeric Kusabira-Orange (pmKO1-S1)	20 µg
AM-V0052	CoralHue® Monomeric Kusabira-Orange (pmKO1-MC1)	20 µg
AM-V0053	CoralHue® Monomeric Kusabira-Orange (pmKO1-MN1)	20 µg
AM-V0044	CoralHue® Humanized Kusabira-Orange (phKO1-S1)	20 µg
AM-V0045	CoralHue® Humanized Kusabira-Orange (phKO1-MC1)	20 µg
AM-V0046	CoralHue® Humanized Kusabira-Orange (phKO1-MN1)	20 µg
AM-V0054	CoralHue® Humanized Monomeric Kusabira-Orange (phmKO1-S1)	20 µg
AM-V0055	CoralHue® Humanized Monomeric Kusabira-Orange (phmKO1-MC1)	20 µg
AM-V0056	CoralHue® Humanized Monomeric Kusabira-Orange (phmKO1-MN1)	20 µg
AM-V0059	CoralHue® Humanized Monomeric Kusabira-Orange (phmKO1-MCLinker)	20 µg
AM-V0050	CoralHue® Humanized Monomeric Kusabira-Orange (phmKO1-MNLinker)	20 µg
AM-V0221	CoralHue® Mitochondria-targeted mKO1 Expression Plasmid (pMT-mKO1)	20 µg
AM-V0222	CoralHue® ER-targeted mKO1 Expression Plasmid (pER-mKO1)	20 µg
AM-V0223	CoralHue® Plasma Membrane-targeted mKO1 Expression Plasmid (pPM-mKO1)	20 µg
AM-V0234	CoralHue® Nucleoplasm-targeted KO Expression Plasmid (pNP-KO)	20 µg

Anti- CoralHue® Kusabira-Orange Antibodies					
Code No.	Product	Clone	Isotype	Size	Applications
M104-3	Anti- CoralHue® Kusabira Orange Monoclonal Antibody	1H7	mouse IgG1κ	100 µg	WB
M104-3S	Anti- CoralHue® Kusabira Orange Monoclonal Antibody (Trial Size)	1H7	mouse IgG1κ	10 µL	WB
M105-3	Anti- CoralHue® Kusabira Orange Monoclonal Antibody	2G9	mouse IgG1κ	100 µg	IPP
M105-3S	Anti- CoralHue® Kusabira Orange Monoclonal Antibody (Trial Size)	2G9	mouse IgG1κ	10 µL	IPP

Application; WB: Western blotting, IPP: Immunoprecipitation

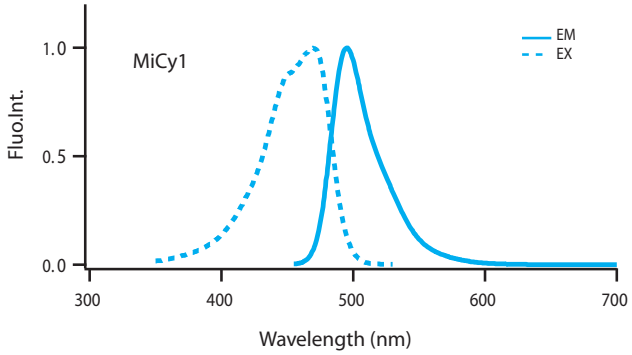
CoralHue® Midoriishi-Cyan

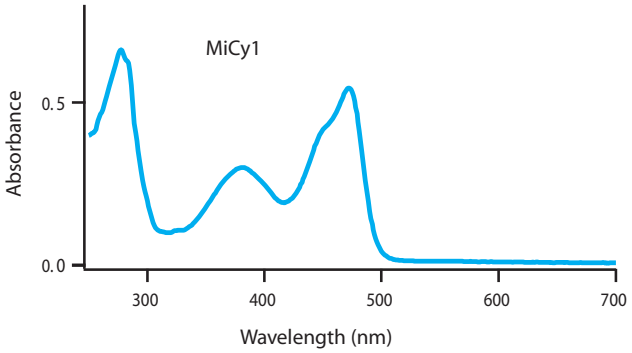
CoralHue® Midoriishi-Cyan fluorescent protein is derived from a stony coral who's Japanese name is "Midori-ishi". Midoriishi-Cyan absorbs light maximally at 472 nm and emits cyan light at 495 nm. Wild-type Midoriishi-Cyan rapidly matures to form a fluorescent dimeric complex which can be used to mark individual cells or to report gene expression without problems stemming from protein aggregation.



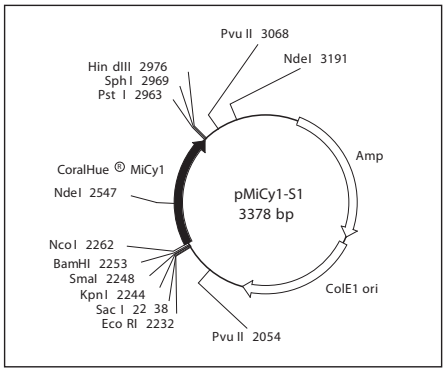
CoralHue® MiCy1 expression in HeLa cell

	Excit. /Emiss.Maxima (nm)	Extinction Coefficient($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	pH sensitivity
MiC y1	472 /495	27,250 (472 nm)	0.9	pK a = 6. 6





Vector



References
Shaner, N.C., et. al. , (2005) Nat. Methods. 2, 905-909. Review.
Karasawa, S., et. al. , (2004) Biochem. J. 381 , 307-312.

CoralHue® Midoriishi-Cyan Fluorescent Proteins		
Code No.	Product	Size
AM-V0061	CoralHue® Midoriishi-Cyan (pMiCy1-S1)	20 µg

Anti- CoralHue® Midoriishi-Cyan Antibodies						
Code No.	Product		Clone	Isotype	Size	Applications
M116-3	Anti-	CoralHue® Midoriishi-Cyan Monoclonal Antibody	2C1	mouse IgG2b	100 µg	IPP
M130-3	Anti-	CoralHue® Midoriishi-Cyan Monoclonal Antibody	5B7	mouse IgG1	100 µg	WB

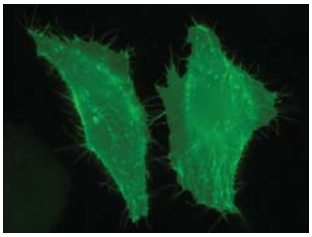
Application; WB: Western blotting, IPP: Immunoprecipitation

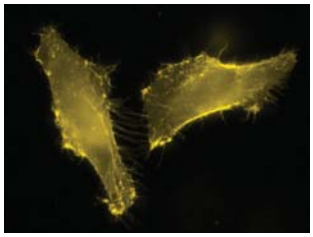
For more information, go to www.mblintl.com

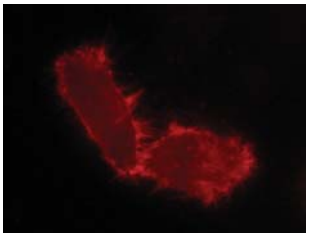
Targeted Plasmids

Azami-Green Kusabira-Orange Keima-Red

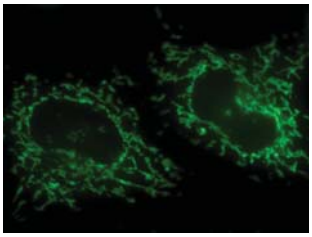
Plasma membrane Targeting

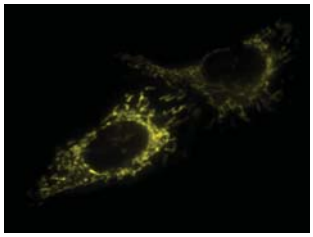

CoralHue® pPM-mAG1

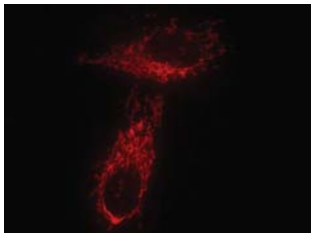

CoralHue® pPM-mKO1


CoralHue® pPM-mKeima-Red

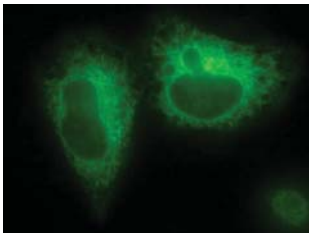
Mitchondria Targeting

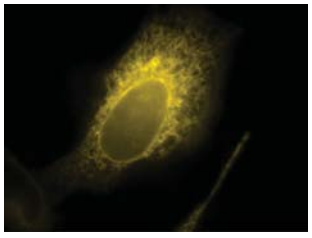

CoralHue® pMT-mAG1


CoralHue® pMT-mKO1

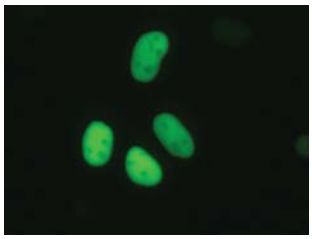

CoralHue® pMT-mKeima-Red

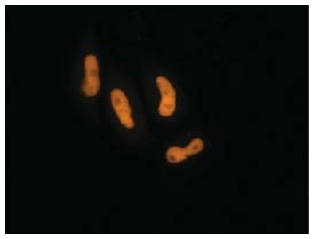
Endoplasmic reticulum Targeting

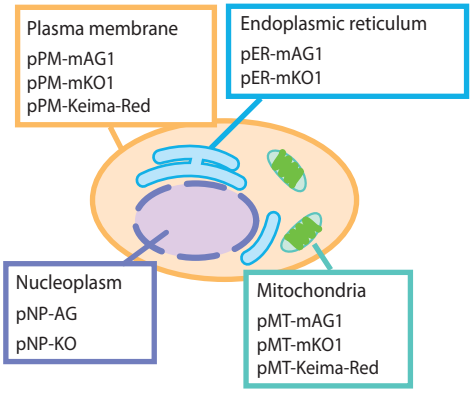

CoralHue® pER-mAG1


CoralHue® pER-mKO1

Nucleoplasm Targeting


CoralHue® pNP-AG


CoralHue® pNP-KO



Targeting site

Code No.	Product	Size
AM-V0203	CoralHue® Plasma Membrane-targeted mAG1 Expression Plasmid (pPM-mAG1)	20 µg
AM-V0223	CoralHue® Plasma Membrane-targeted mKO1 Expression Plasmid (pPM-mKO1)	20 µg
AM-V0253	CoralHue® Plasma Membrane-targeted mKeima-Red Expression Plasmid (pPM-mKeima-Red)	20 µg
AM-V0201	CoralHue® Mitochondria-targeted mAG1 Expression Plasmid (pMT-mAG1)	20 µg
AM-V0221	CoralHue® Mitochondria-targeted mKO1 Expression Plasmid (pMT-mKO1)	20 µg
AM-V0251	CoralHue® Mitochondria-targeted mKeima-Red Expression Plasmid (pMT-mKeima-Red)	20 µg
AM-V0202	CoralHue® ER-targeted mAG1 Expression Plasmid (pER-mAG1)	20 µg
AM-V0222	CoralHue® ER-targeted mKO1 Expression Plasmid (pER-mKO1)	20 µg
AM-V0214	CoralHue® Nucleoplasm-targeted AG Expression Plasmid (pNP-AG)	20 µg
AM-V0234	CoralHue® Nucleoplasm-targeted KO Expression Plasmid (pNP-KO)	20 µg

CoralHue® fl uorescent proteins used in these products were co-developed with the Laboratory for Cell Function and Dynamics, the Advanced Technology Development Center, the Brain Science Institute, and the Institute of Physical and Chemical Research (RIKEN) (lab head Dr. Atsushi Miyawaki).

The use of CoralHue® fl uorescent proteins require a license. Amalgaam grants non-profi t research organizations an international, royalty-free, non-exclusive, limited license to use this product for non-commercial research use only. This license excludes the right to sell or transfer this product, its components, or modifi cations of this product to third parties. Any other uses require a license. The use of this product by for profi t organizations, for either commercial or non-commercial use, requires a license. For additional licensing information, please contact MBL at 781-939-6964 or sales@mblintl.com. The CMV promoter is covered under U.S. Patents 5,168,062 and 5,385,839 and its use is permitted for research purposesonly. Any other use of the CMV promoter requires a license from the University of Iowa Research Foundation, 214 Technology Innovation Center, Iowa City, IA 52242."

Vector sequences are available on our website under Technical Resources.

MBL International Corporation is a leading life science company focused on providing high quality products and solutions for life science research and clinical diagnostics.

MBL International Corporation develops, manufactures and markets a wide range of ELISA and gold standard IFA test kits to aid in the diagnosis of autoimmune and infectious disease as well as an extensive portfolio of monoclonal and polyclonal antibodies, fluorescent and recombinant proteins, and ELISA kits for research related to cancer, immunology, neuroscience, allergy, autophagy, and apoptosis.

Our products are used widely in academic research institutions, pharmaceutical and biotechnology companies, government agencies, as well hospital and reference laboratories. By providing a consultative approach, superior technical and customer support, and convenient purchasing options, MBL International Corporation is your partner in solving your scientific and clinical challenges.

MBL International Corporation
4 H Constitution Way
Woburn, MA 01801, USA
Tel: (781) 939-6964
(800) 200-5459
Fax: (781) 939-6963
URL: http://www.mblintl.com email: info@mblintl.com

MBL Medical & Biological Laboratories Co., LTD.
KDX Nagoya Sakae Bldg. 10F
4-5-3 Sakae, Naka-ku, Nagoya, Aichi
460-0008, JAPAN
Tel: 81-52-971-2081 Fax: 81-52-971-2337
URL: https://ruo.mbl.co.jp

Amalgaam an MBL Company