New color

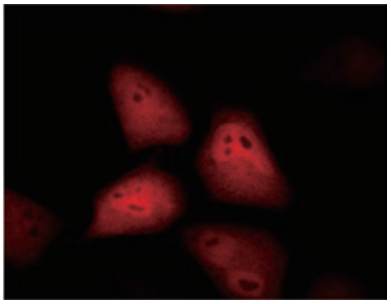
Fluoppi Red

MBL

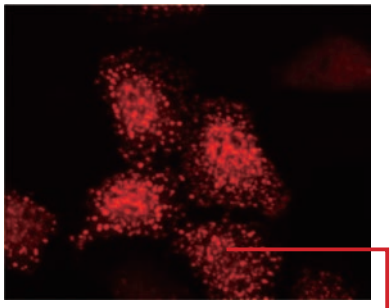
For Research Use Only

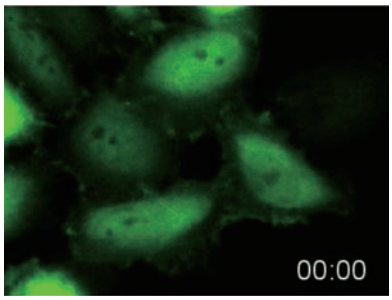
Red (Monti-Red) joins the lineup of Fluoppi, a novel tool which allows you to visualize protein-protein interactions in living cells.

In combination with **Green (Azami-Green)**, it enables multicolor imaging!

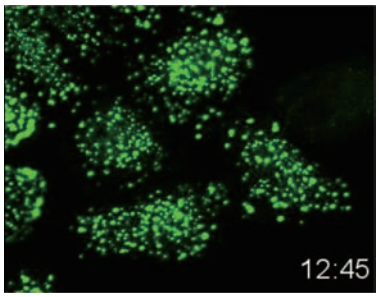


Rapamycin





Rapamycin



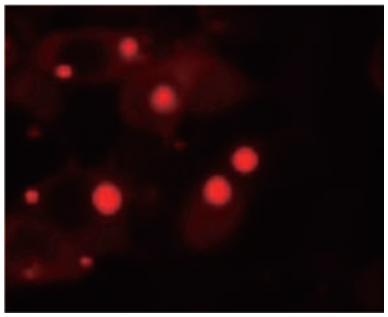
mTOR-FKBP12 interaction

Protein protein interaction (PPI) of mTOR FRB domain and FKBP12 (FK506 binding protein) can be induced by Rapamycin. In this experiment, FKBP12 was fused to Ash-tag (FKBP12-Ash) and mTOR was fused to Monti-Red (mTOR-MR) or Azami-Green (mTOR-AG). Each color of mTOR construct was co-expressed with FKBP12-Ash then Rapamycin was added to the medium.

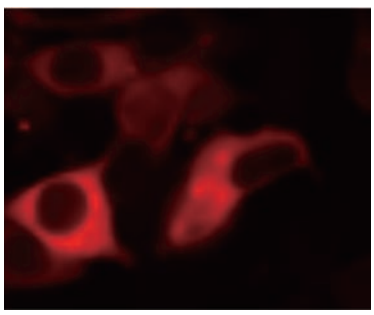
Foci were formed when FKBP12 interacts with mTOR.

Screening of PPI (Protein-Protein Interaction) inhibitors

One of the outstanding features of Fluoppi is its reversibility. By adding PPI inhibitors, the pre-formed fluorescent foci would be dissociated in real time manner.This feature is perfectly suited for screening of PPI inhibitors in each phase of drug discovery program.



Nutlin-3



Inhibition of p53-MDM2 interaction

Using p53-Ash-tag/MDM2-Monti-Red, Nutlin-3, a p53/MDM2 PPI inhibitor, was added to the medium after confirming the formation of Foci. Dissociation of Foci were observed in 10 minutes after the addition of Nutlin-3.

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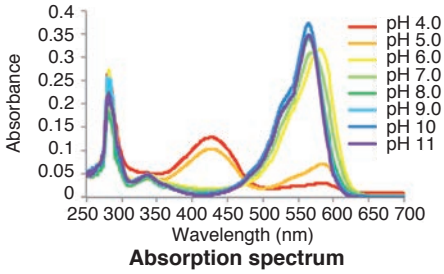
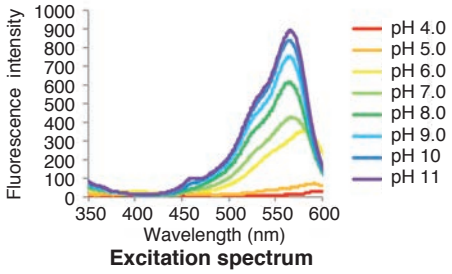
http://ruo.mbl.co.jp/

The new red fluorescent protein, Monti-Red

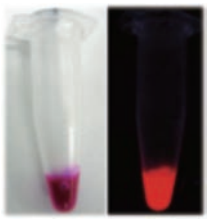
Monti-Red is a new red fluorescent protein that is developed for Fluoppi technology.
Among the many red fluorescent proteins, Monti-Red is relatively bright, allows clear observation of Foci under a fluorescence microscope, and is ideal for use in long-term imaging.

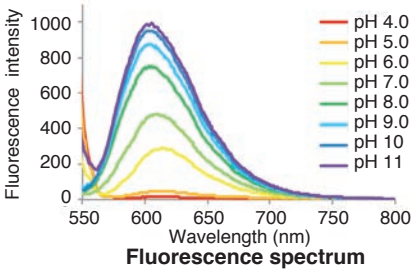


Absorption spectrum

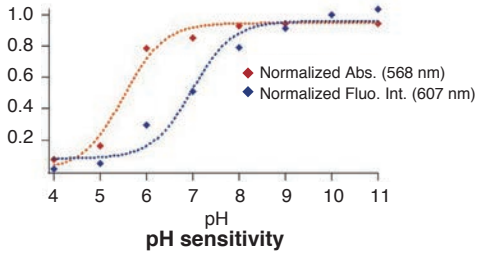


Excitation spectrum





Fluorescence spectrum

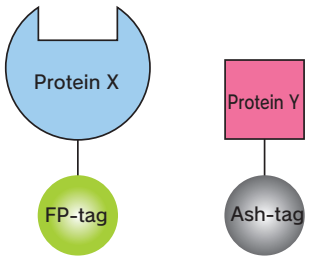


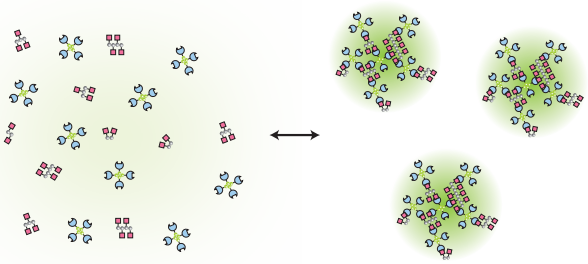
pH sensitivity

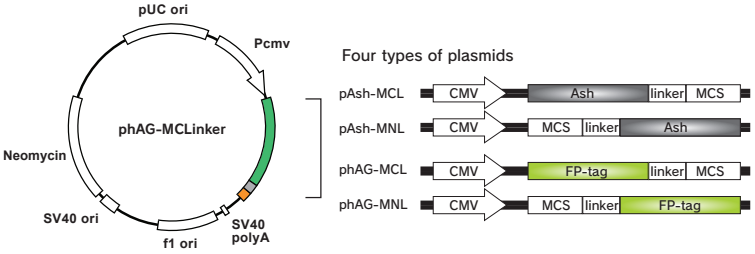
Oligomerization	Excit./Emiss. Maxima (nm)	Molar Extinction Coefficient ($M^{-1}cm^{-1}$)	Fluorescence Quantum Yield	Brightness	pH sensitivity	Cytotoxicity
Tetramer	571 / 607	83000	0.3	24.9	pKa=5.5	No

Principles of Fluoppi

Fluoppi is a tag technology. It employs an oligomeric assembly helper tag (Ash-tag) and a tetrameric fluorescent protein tag (FP-tag) to create detectable fluorescent foci when there are interactions between two proteins fused to the tags. By way of example, genetic fusion of protein X with FP-tag, and Y with Ash-Tag creates a tetrameric fluorescent fusion protein X-FP and an oligomeric fusion protein Y-Ash respectively. Because each fusion protein has multiple Xs or Ys, interaction between protein X and Y causes large lattice like complexes where the fluorescence by X-FP is concentrated and detectable as fluorescent foci.







"**Flexible**" peptide linker (22 aa):
N term.- NSADG GGGSG GSGGS GGGST QG – C term.

AM-8001M and AM-8002M contain the 4 types of vectors described above.

	Code No.	Product name
NEW	AM-8002M	Fluoppi : Ash-Red (Ash-MNL/MCL + Monti-Red-MNL/MCL)
NEW	AM-VS0802M	Monti-Red for Fluoppi (pMonti-Red-MNL/MCL)
	AM-8001M	Fluoppi : Ash-hAG (Ash-MNL/MCL + hAG-MNL/MCL)
NEW	AM-VS0801M	humanized Azami-Green for Fluoppi (phAG-MNL/MCL)
	AM-8201M	Fluoppi : Ash-hAG [p53-MDM2]
	AM-8202M	Fluoppi : Ash-hAG [mTOR-FKBP12]

NOTE 1) This product does not guarantee detection of interaction between all proteins.
NOTE 2) The fluorescent proteins used in this product, hAzami-Green and hMonti-Red, differ from each other in fluorescence and other properties.
Even when used in the same experiment system, differences may be observed in the form of Foci such as IC50.

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Produced by
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