Interchim Innovations

Interbiotech - BioScience Innovations

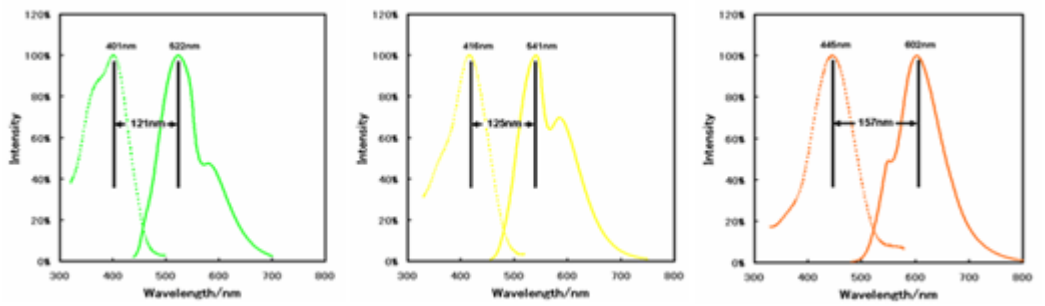
IST-Fluolid, the solid fluorescence technology

Fluolid is

Features

1. **Brighter : high quantum yield** in the solid state
2. **no photobleach** - high stability for light, heat and pH
3. **higher labeling rate** is than that of traditional dye
4. **longer stocke's shift** – lowers cross-fluorescence in multiplex

[Superior fluorescence features of IST Fluolid]



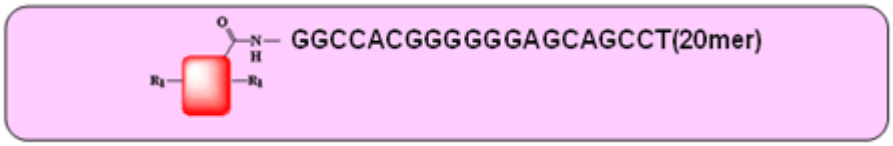
UV spectra of Fluolid labeled IgG (left: green, center: yellow, right: orange Wavelength (Ex and Em)

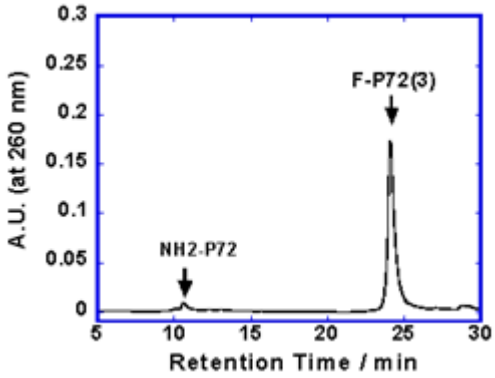
	IST Fluolid	Traditional Dye
Stability of Light	good (Stable over 2 years under daylight)	bad
Stability of Temperature	Good (over 200°C)	bad (degrade at r.t.)
Stability of pH	good (stable for pH1-14)	bad (usable pH5-9)
Stokes Shifts	Wide (about 100-150nm)	Narrow (about 10-50nm)
Fluorescent in the solid state	Highly Fluorescent	quenching
Storage Condition	Under room temperature*	Under -20°C

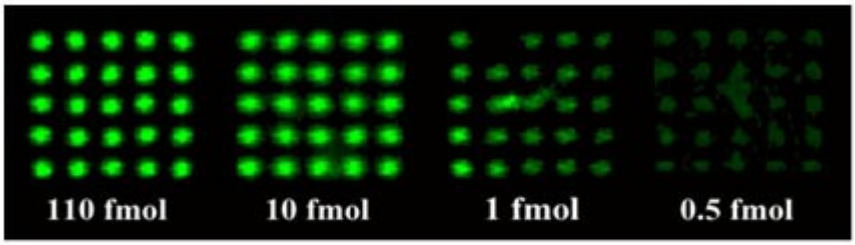
	λ_{abs} /nm	λ_{em} /nm
Commercial Dyes	Stokes shift	
Acridine Orange	460/500	526/650
Cy3	550	565
Cy5	650	670
FITC	494	518
IST Dyes	Stokes shift	
Fluolid-W Orange	440	602
Fluolid-W Yellow	410	541
Fluolid-W Green	395	522

* The fluorescence of "IST Fluolid" has high stability under various conditions.But, to keep the activity of the succinimidyl ester group, please store at 2-8 °C.

Applications - [Labeling of Oligo DNA with IST Fluolid]







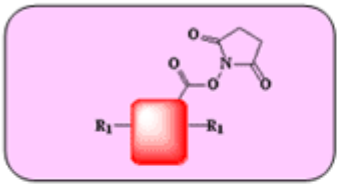
fmol = 10^{-12}mol

Bio Rad Molecular Imager FX 488nm

- **Almost 90-100% labeling of P72 oligo DNA** (traditional dye : 20-80%)
- **Measurement at low concentration with existing micro imager**
- **Detectable of the dried sample at low concentration (~10-12mol)**

Applications - [Labeling of BSA using IST Fluolid]

BSA (Bovine Serum Albumin) Protein



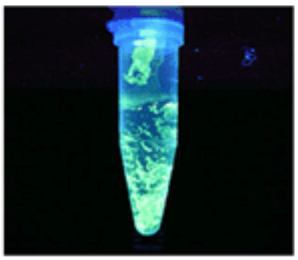
BSA + Carbonate buffer (pH8.3)

IST Fluolid/ DMSO

rt, 2h

0.1 M TEAA buffer(pH7.0) prepared to 1mL

Purified by NAP-10 colomn
(GE healthcare, SephadexG-25)



Freeze dried BSA Protein showed strong fluorescence in the solid state.

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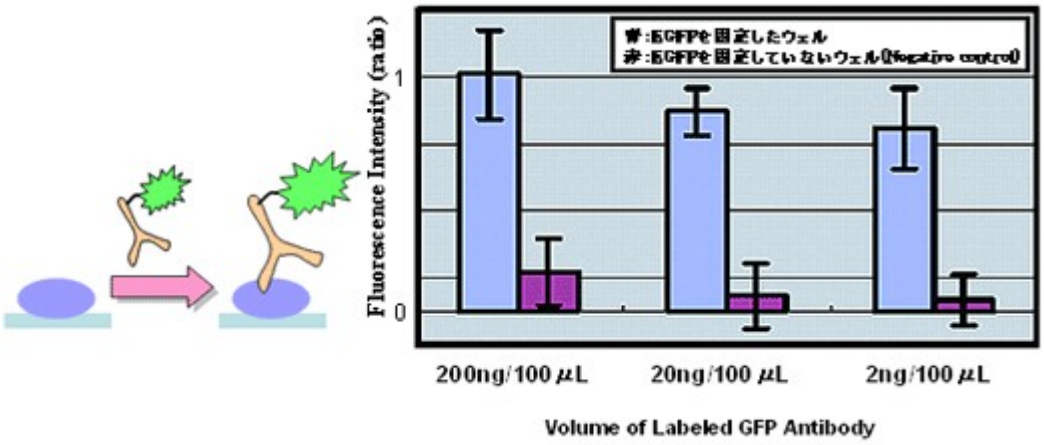
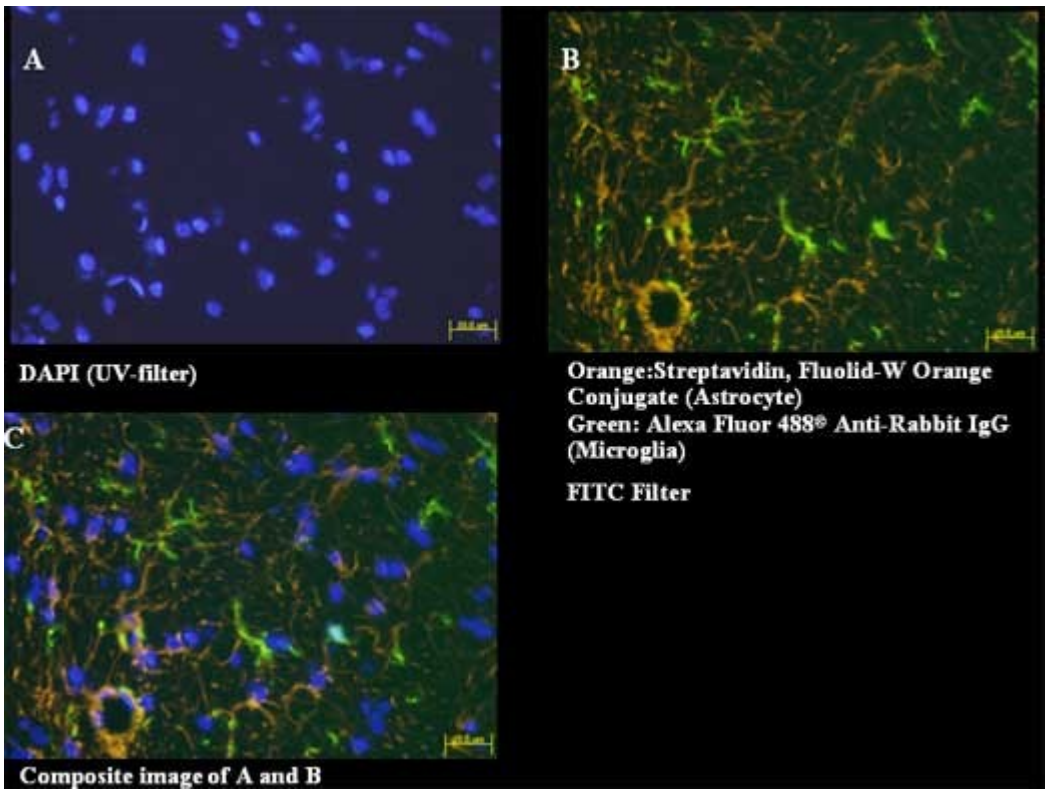
Applications - [Labeled GFP antibody]



- The labeling of GFP antibody advanced quantity.
- The labeled GFP antibody keeps the activity.
- The labeled GFP antibody was trapped by fixed EGFP.

Application - [Multi-color Immunostaining-1]



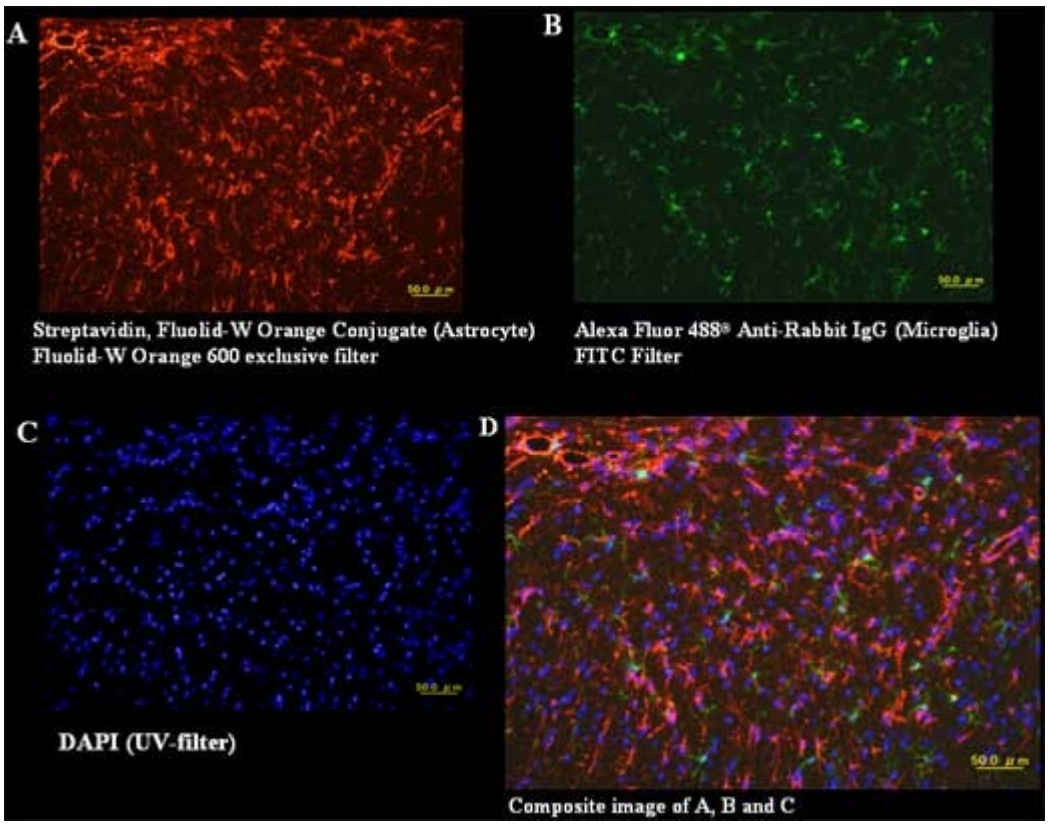
Protocol of Multi-Color Immunostaining [r]:

Tissue Section: Rat Brain(Bregma-0.26mm)
PBS: 0.1 M Phosphate Buffer(pH7.2~7.4)
Primary Antibody A: Anti-GFAP Mouse monoclonal IgG (Astrocyte marker)
Primary Antibody B: Anti-Iba1 Rabbit polyclonal IgG (Microglia marker)
Secondary Antibody C: Anti-Mouse IgG, Biotin Conjugate
Secondary Antibody D: Anti-Rabbit IgG, Alexa Fluor® 488 Conjugate

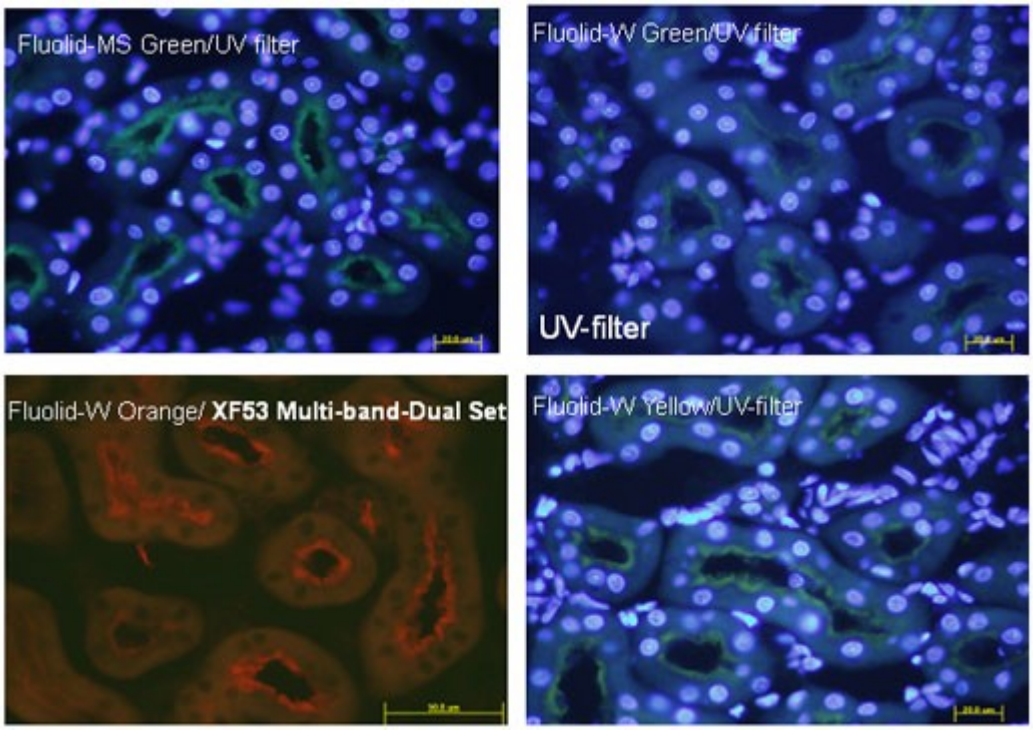
1. Washing in PBS for 20 min is repeated 3 times
2. Blocking by 1%BSA/PBS Solution for 1 hour under room temperature
3. Reaction with primary antibodys*/PBS for 1 day under room temperature [* Mixed with A and B.]
4. Washing in PBS for 10 min is repeated 3 times
5. Reaction with secondary antibodys*/PBS for 3 hours under room temperature [* Mixed with C and D.]
6. Washing in PBS for 10 min is repeated 3 times
7. Reaction with Streptavidn, Fluolid-W Orange 600 Conjugate/PBS for 1 hours under room temperature
8. Washing in PBS for 10 min is repeated 3 times
9. Mounting in Vectashield with DAPI
10. Observation of Immunostaining

Application - [Multi-color Immunostaining-2]

(Fluolid-W Orange 600 exclusive filter)



Application - [Observation of Lectin staining]



Protocol of Lectin Immunostaining [1]:

A / Preparation of tissue sections - Rat Kidney

Animal: Rat aged of 7 months to 8 months

1. Perfusion fixation with solution: 2.8% paraformaldehyde, 0.2% picric acid, 0.1 mol/L Phosphate buffer(pH7.2~7.4)
2. Infiltration for 2 H to 3 H [25% sucrose/ 0.1 M Phosphate Buffer(pH7.2~7.4)]
3. Preparation of 8µm cryosection

B / Protocol of Lectin Staining

PBS: 0.1 M Phosphate Buffer(pH7.2~7.4)

Lectin: Peanuts Lection, biotin Conjugate

Streptavidin: Streptavidin, Fluolid-W Conjugate

1. Washing in PBS for 20 min is repeated 3 times
2. Reaction with Lectin/PBS for 1 day under room temperature
3. Washing in PBS for 10 min is repeated 3 times
4. Reaction with Streptavidn, Fluolid-W Conjugate/PBS for 3 hours at room temp.
5. Washing in PBS for 10 min is repeated 3 times
6. Mounting in Vectashield with DAPI
7. Observation of Lectin staining

For ordering:

Price and technical sheet on line

Fluolid-W Orange 600 Protein Labeling Kit	**DU7720, 1 KIT**
Fluolid-W Yellow 540 Protein Labeling Kit	**DU7740, 1 KIT**
Fluolid-W Green 520 Protein Labeling Kit	**DU7780, 1 KIT**
Fluolid-W Orange 600 Oligonucleotide Amine Labeling Kit	**DU7710, 1 KIT**
Fluolid-W Yellow 540 Oligonucleotide Amine Labeling Kit	**DU7750, 1 KIT**
Fluolid-W Green 520 Oligonucleotide Amine Labeling Kit	**DU7770, 1 KIT**
Fluolid-W Orange 600 succinimidyl ester	**DU7730, 1 MG**
Fluolid-W Yellow 540 succinimidyl ester	**DU7760, 1 MG**
Fluolid-W Green 520 succinimidyl ester	**DU7790, 1 MG**

Related products/documents

Products HighLights Overview

Including FluoProbes labeling dyes, Desalting tools,

Information inquire

Reply by Fax : +33 (0) 4 70 03 82 60 or email at interbiotech@interchim.com

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_____

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