

FF beads / FS beads

■ Features

- FF beads are magnetically separable fluorescent beads, incorporating a fluorescent dye into conventional FG beads[®].
- FS beads are nonmagnetic fluorescent beads.

	Fluorescent dye	Functional Group	Product Number	
FF beads Magnetism: Magnetic Diameter: Approx.0.2 μm	Eu Ex:340 nm Em:616 nm	Epoxy	TAB8849N2110	
		Carboxyl	TAB8849N2140	
		Streptavidin	TAB8849N2170	
		Protein G	TAB8849N2173	
	Cyanine3 Ex:550 nm Em:576 nm	Carboxyl	TAB8850N2140	
		Streptavidin	TAB8850N2170	
	Cyanine5 Ex:650 nm Em:684 nm	Carboxyl	TAB8851N2140	
		Streptavidin	TAB8851N2170	
	FS beads Magnetism: Nonmagnetic Diameter: Approx.0.4 μm	Eu Ex:340 nm Em:616 nm	Epoxy	TAB5849N2110
			Carboxyl	TAB5849N2140
Streptavidin			TAB5849N2170	
Protein G			TAB5849N2173	
Cyanine3 Ex:550 nm Em:576 nm		Carboxyl	TAB5850N2140	
		Streptavidin	TAB5850N2170	
Cyanine5 Ex:650 nm Em:684 nm		Carboxyl	TAB5851N2140	
		Streptavidin	TAB5851N2170	

【How to purchase】

Tamagawa trading Co., LTD. Overseas Sales Department
 Address:1-3-1 Haba-cho, Iida, Nagano Pref. 395-0063 Japan
 Phone:+81-265-56-5423
 Fax:+81-265-56-5427

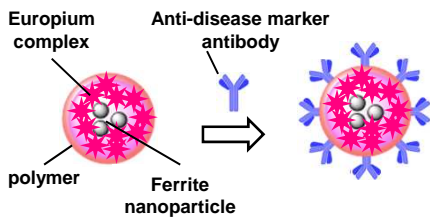
【Technical inquiries】

Tamagawa seiki Co., Ltd. Biontronics Laboratory
 Phone:+81-265-21-0501 (Monday-Friday 9:00-17:00)
 Fax:+81-265-21-1861

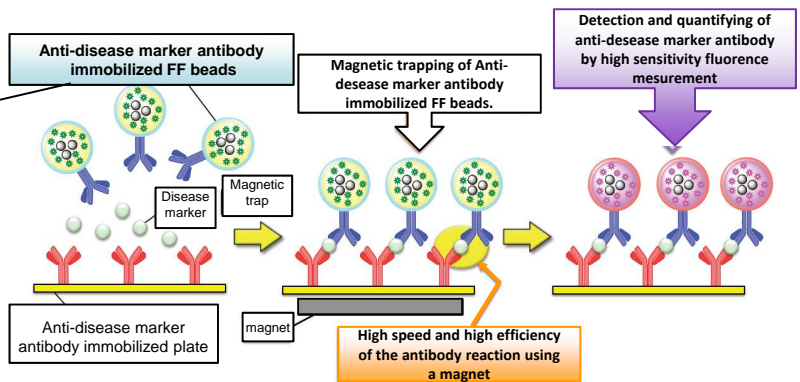
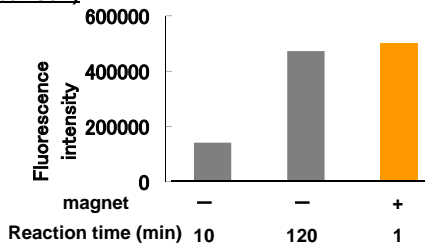
Application

1. Sandwich immunoassay using FF Eu beads

Application to immunoassay by antibody immobilized FF beads. Because FF beads contain plenty of fluorescent dye, the detection sensitivity of them has become higher than that of the labelled antibodies of the conventional immunoassay. In addition, the reaction efficiency and the measuring speed have been improved by using a magnet for antigen-antibody reaction.



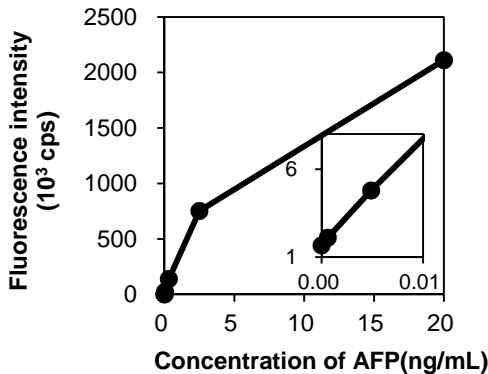
Effect on the antigen-antibody reaction efficiency due to the magnetic trapping (fluorescence intensity comparison)



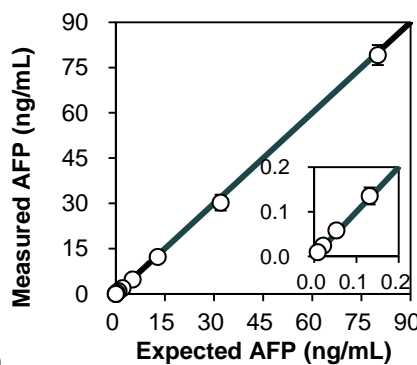
Faster reaction by using a magnet ⇒ Get a strong signal in just 1 minute.

Detection result of the α -fetoprotein (tumor marker) in human serum

Calibration curve of purified AFP detection



Dilution linearity test of serum AFP detection



Measurement time and measurement sensitivity (compared to the existing system) **CV < 10%**

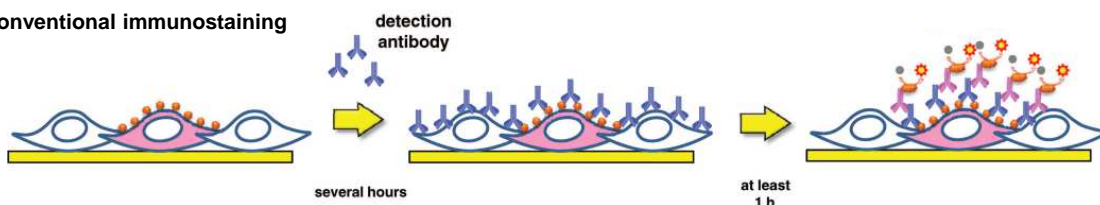
	FF beads	CLEIA
Measurement time	8 min	30 min
Limit of Detection (LOD)	15 pg/mL	50 pg/mL
Limit of Quantitation (LOQ)	24 pg/mL	200 pg/mL

Reduction of measuring time and increase of sensitivity by FF beads

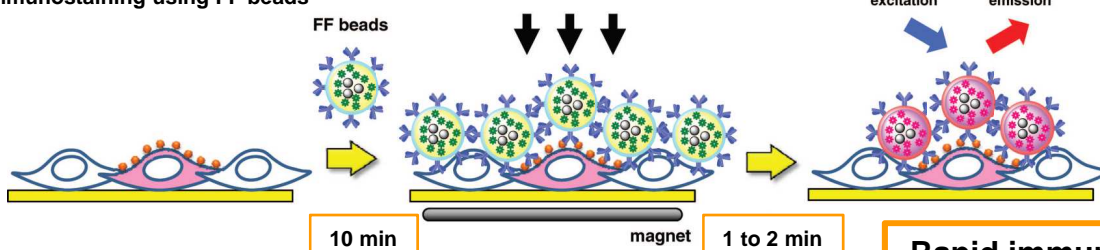
2. Immunostaining using FF Eu beads

When staining EGFR receptors in a xenograft specimen of A 431 human epidermoid carcinoma cell by using FF beads, the result similar to the result of the conventional immunostaining was obtained in a short time.

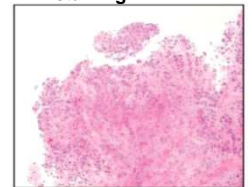
Conventional immunostaining



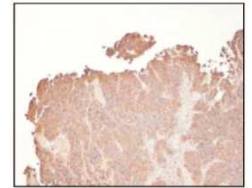
Immunostaining using FF beads



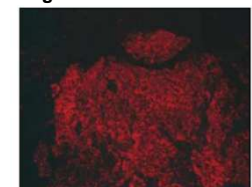
HE staining



Paraffin-embedded



Immunohistochemical with FF beads



Rapid immunostaining is possible