BCECF, Free Acid

BCECF (2′,7′ -*bis*-(Carboxyethyl)-5-(and-6)-carboxyfluorescein) is the most widely used fluorescent pH sensor. Because its pK_a (6.97) is close to physiological pH, BCECF can detect cytosolic pH change with high sensitivity.

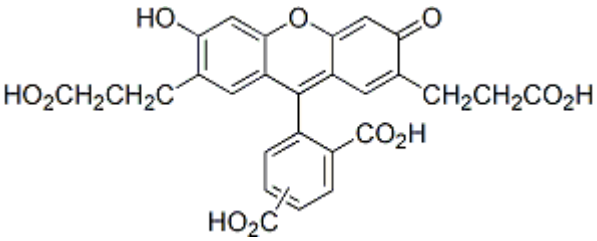
Product attributes

CAS number	85138-49-4
Cell permeability	Membrane impermeant
pKa	pKa 6.97
Indicator type	Ratiometric
Colors	Green
Excitation/Emission	508/530 nm (high pH)

Product Description

BCECF (2′,7′ –*bis*-(Carboxyethyl)-5-(and-6)-carboxyfluorescein) is the most widely used fluorescent pH sensor. Because its pK_a (6.97) is close to physiological pH, BCECF can detect cytosolic pH change with high sensitivity. At low pH, the dye is weakly fluorescent but becomes more fluorescent with increasing pH. The excitation spectrum of the dye undergoes a slight shift during pH change, while the wavelength of the emission maximum remains unchanged. The pH is determined ratiometrically by the relative fluorescent intensities at 535 nm when the dye is excited at 439 nm and 505 nm respectively. BCECF, acid is membrane-impermeant and therefore can be loaded into cells via microinjection or scrape loading. Also see the membrane permeant AM ester form of BCECF (51011).

- $\lambda_{Ex}/\lambda_{Em}$ = 508/530 nm (high pH)
- Yellow orange solid soluble in DMSO
- Store at 4 °C and protect from light, especially in solution
- MW: 520.5
- [85138-49-4]



References

1. J Immunol Meth 108, 255 (1988).

2. Biochem J 304, 751 (1994).

3. J Immunol Meth 172, 255 (1994).