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BCECF-AM

Item# Unit Size
B262-10 1 mg

Chemical Name: 3'-O-Acetyl-2',7'-bis(carboxyethyl)-4 or 5-carboxyfluorescein, diacetoxymethyl ester **CAS:** 117464-70-7

Appearance: orange or orange-brown crystals **Purity:** $\geq 90.0\%$ (HPLC)

MW: 688.59, $C_{35}H_{28}O_{15}$

Storage Condition: -20°C , protect from light **Shipping Condition:** ambient temperature

Product Description

BCECF is the most widely used intracellular pH probe. Dr. Tsien and others improved this carboxyfluorescein by introducing two extra carboxylates that allow it to be retained better by the cell. BCECF is highly water-soluble because it has 4 to 5 negative charges at neutral pH; it becomes difficult to pass through the cell membrane after loading. Its pKa value, 6.97, is higher than that of carboxyfluorescein. BCECF has an isosbestic point at 439 nm in the excitation spectra, so it can be used in ratiometry, similar to Fura 2.

Wavelengths of 505 nm and 439 nm are usually used for the ratiometric assay, and 490 nm and 450 nm filters are set in front of the excitation light source. The 530 nm filter is used for its fluorescent signal. Please note that the excitation spectrum is slightly different from the absorption spectra. BCECF-AM is an acetoxymethyl ester of BCECF that enables easy loading of BCECF into cells. BCECF-AM accumulates in a cell only by incubation as do the other acetoxymethyl esters. BCECF-AM is very sensitive to moisture; it should be carefully handled. The color of the DMSO solution changes from pale yellow to dark orange with decomposition of the AM form. Therefore, hydrolysis of the AM ester can be monitored by changes in

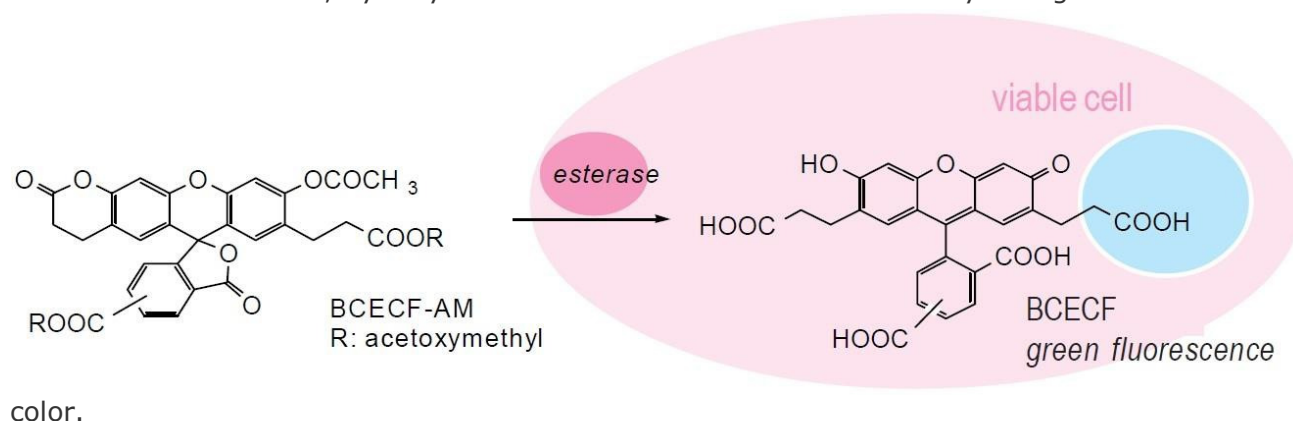


Fig. 1 Cell staining mechanism



CERTIFICATE NO. 32423

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