

Fluoresbrite® Europium Carboxylate Microspheres

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Catalog Numbers: 25488, 25489, 25490

DESCRIPTION

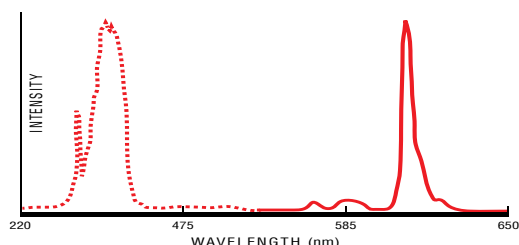
Despite the popularity of traditional fluorophores, distinguishing their signal from background autofluorescence can present a challenge in applications where extremely low detection limits are required. Whereas most fluorophores have pico- or nanosecond fluorescence lifetimes, compounds such as rare earth lanthanide chelates exhibit longer (microsecond) lifetimes, allowing fluorescence decay to be monitored over time. This technique provides a means to separate "true" fluorescence signal from short-lived background fluorescence, and an opportunity to improve assay sensitivity.

These same compounds are also characterized by long Stokes shifts, or intervals between fluorescence excitation and emission maxima. This property also lends itself to low background signal, and avoids regions of fluorescence overlap with other common reporters in multicolor assays.

Polysciences offers europium chelate microspheres in diameters of 0.1µm, 0.2µm and 0.3µm to address the needs of individual assays, including immunochromatographic and microwell-based formats. Our europium products offer extremely bright fluorescence (excitation: 365nm; emission: 610nm) and exceptional stability, in addition to well-functionalized carboxylated surfaces for the covalent attachment of ligand.

CHARACTERISTICS

Nominal Diameters: 0.1µm, 0.2µm or 0.3µm
Supplied as: 1% suspension in DI H₂O with 0.05% NaN₃
Excitation max: 365nm
Emission max: 610nm



ORDERING INFORMATION

Cat. #	Description	Sizes
25488	Fluoresbrite® Europium (Eu) Carboxylate Microspheres, 0.10µm	1ml, 5ml or 10ml
25489	Fluoresbrite® Europium (Eu) Carboxylate Microspheres, 0.20µm	1ml, 5ml or 10ml
25490	Fluoresbrite® Europium (Eu) Carboxylate Microspheres, 0.30µm	1ml, 5ml or 10ml
BLI 21960	Europium Chelate COOH Sampler Pack (1mL of 0.10µm, 0.20µm, 0.30µm)	1mL

FURTHER READING

- Liang R-L, Xu X-P, Liu T-C, Zhou J-W, Wang X-G, Ren Z-Q, Hao F, Wu Y-S. (2015) *Rapid and sensitive lateral flow immunoassay method for determining alpha fetoprotein in serum using europium (III) chelate microparticles-based lateral flow test strips*. *Anal Chim Acta*; 891:277-283.
- Soukka T, Paukkunen J, Härmä H, Lönnberg S, Lindroos H, Lövgren. (2001) *Supersensitive time-resolved immunofluorometric assay of free prostate-specific antigen with nanoparticle label technology*. *Clin Chem*; 47(4):1269-1278
- Xia X, Xu Y, Ke R, Zhang H, Zou M, Yang W, Li Q. (2013) *A highly sensitive nanoparticle-based lateral flow immunoassay for detection of chloramphenicol residue*. *Anal Bioanal Chem*; 405(23):7541-4.

HANDLING, STORAGE AND SAFETY

Handling Lanthanide chelate complexes are sensitive to and will lose fluorescence when exposed to high heat. Processes that generate heat should be tested and optimized to evaluate effects. Probe sonication should be avoided, and bath sonication should be used with caution.

Storage Store at 4°C in the supplied opaque container. Freezing of particles may result in irreversible aggregation and loss of binding activity. The expiration date is 24 months from date of purchase, provided the product is handled in accordance with the manufacturer's recommendations.

Safety This particle suspension contains sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the Safety Data Sheet for more information.

These products are for research use only and are not intended for use in humans or for *in vitro* diagnostic use.

TO ORDER

In The U.S. Call: 1(800) 523-2575 • (215) 343-6484
In The U.S. Fax: 1(800) 343-3291 • (215) 343-0214

In Germany Call: +(49) 06201-845200
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In Asia Call: (886) 2 8712 0600
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