

Zinpyr

Product Information

Name :	Zinpyr-1 (Zpy1)
Catalog Number :	FP-AY6881 , 5 mg
Structure :	$C_{46}H_{36}Cl_2N_6O_5$
Molecular Weight :	823.74
Absorption / Emission :	$\lambda_{exc}/\lambda_{em} = 515 / 525 \text{ nm}$

Name :	Zinpyr-4 (Zpy4)
Catalog Number :	FP-AY6891 , 1 mg
Structure :	$C_{40}H_{31}ClN_4O_5$
Molecular Weight :	683.17
Absorption / Emission :	$\lambda_{exc}/\lambda_{em} = 515 / 525 \text{ nm}$

Storage: +4°C (K). Protect from light and moisture

Introduction

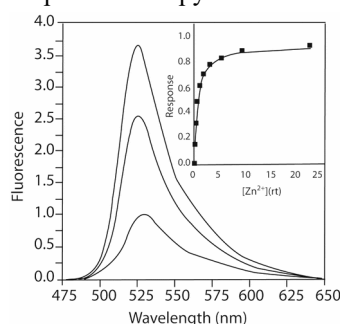
Zinc detection is needed in studies like ecology, toxicology, neurology, enzyme activity, metal ion transport through ion channels. Fluorescent probes for Zn^{2+} simply overcomes conventional methods (like spectrometry, chromatography) in many applications, including Zn^{2+} assay in complex samples, Zn^{2+} concentration inside cells. Zn^{2+} interferes also with many other ions probes (i.e. Fluo-3 for Ca^{+}), requiring to block it (see TPEN) or making Zn^{2+} study necessary.

Zinpyr stains zinc-injured neurons much better than the conventional TSQ dye. The excitation/emission wavelengths in the visible range. It very stable at room temperature.

- Lipophilic ; stains bouton zinc
- Threefold increase in fluorescence with zinc binding
- High specificity for zinc

Zinpyr-1 is a lipophilic zinc sensing fluorophore. It exhibits a 4-fold increase in emission from no zinc to saturated zinc and can be used to stain mossy fiber zinc.

Fluorescence emission response of Zinpyr-1 to buffered Zn^{2+} solutions



Zinpyr-4 is a congener of Zinpyr-1, but is lipophobic, thus useful for near membrane measurements. This stain can be used to stain zinc positive cells, that are seen in conditions such as trauma, hemorrhage and ischemia. Since it does not stain the mossy fibers, it provides a very good signal noise ratio.

Directions for use

Protocol may found in the literature.

Related products

- Zinquin, FP-T3329A
- TFLZn
- TSQ

References

- Walkup, G.K., *et al.*, *J. Am. Chem. Soc.*, **122**, 5644 (2000)
- Burdette S., *et al.*, « ZP4, an improved neuronal Zn sensor of the Zinpyr family », *J Am Chem Soc.*, **19**,125(7),1778 (2003) [Abstract](#)
- Burdette S., *et al.*, « Bioinorganic Chemistry Special Feature: Meeting of the minds: Metalloneurochemistry », *PNAS*, **100**, 3605 - 3610 (2003) [Article](#)

Ordering information

Catalog size quantities and prices may be found at <http://www.fluoprobes.com>
Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® Hotline : +33(0)4 70 03 73 06

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