

Certificate of Analysis

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Product Name: CRANAD 2

Catalog No.: 4803

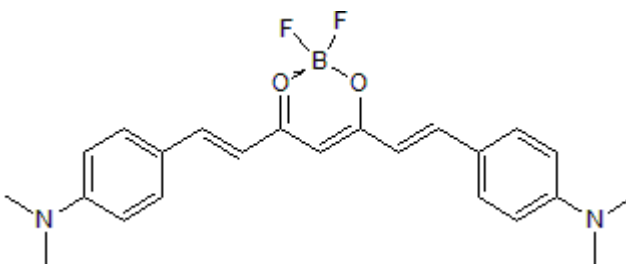
Batch No.: 1

CAS Number: 1193447-34-5

IUPAC Name: (T-4)-[(1E,6E)-1,7-Bis[4-(dimethylamino)phenyl]-1,6-heptadiene-3,5-dionato- $\text{K}^3, \text{K}^{\text{O}^5}$]difluoroboron

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$\text{C}_{23}\text{H}_{25}\text{BF}_2\text{N}_2\text{O}_2$
Batch Molecular Weight:	410.26
Physical Appearance:	Black solid
Solubility:	DMSO to 5 mM with gentle warming
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99.9% purity
^1H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure

Microanalysis:	Carbon Hydrogen Nitrogen		
Theoretical	67.34	6.14	6.83
Found	67.04	6.12	6.9

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Near-infrared probe that binds to Aβ40 aggregates (K_d = 38 nM) and elicits an emission blue shift. Shown to bind to plaques in APP-PS1 transgenic mice, in vitro. Detects senile plaques in 19-month-old Tg2576 mice in vivo. Penetrates the blood-brain barrier.

Physical and Chemical Properties:

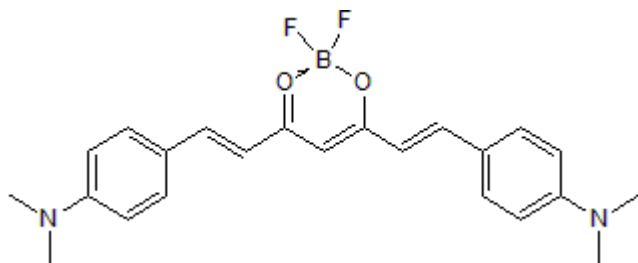
Batch Molecular Formula: C₂₃H₂₅BF₂N₂O₂

Batch Molecular Weight: 410.26

Physical Appearance: Black solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 5 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ran et al (2009) Design, synthesis, and testing of difluoroboron-derivatized curcumins as near-infrared probes for *in vivo* detection of amyloid-beta deposits. *J. Am. Chem. Soc.* **131** 15257. PMID: 19807070.

Ran et al (2011) Non-conjugated small molecule FRET for differentiating monomers from higher molecular weight amyloid beta species. *PLoS One.* **6** e19362. PMID: 21559413.

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