

Certificate of Analysis

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Product Name: RuBi-5-HT

Catalog No.: 3856

Batch No.: 1

IUPAC Name: (bis(2,2'-Bipyridine-*N,N'*)trimethylphosphine)-5-hydroxytryptamine ruthenium(2⁺) dihexafluorophosphate complex

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₃H₃₇F₁₂N₆OP₃Ru

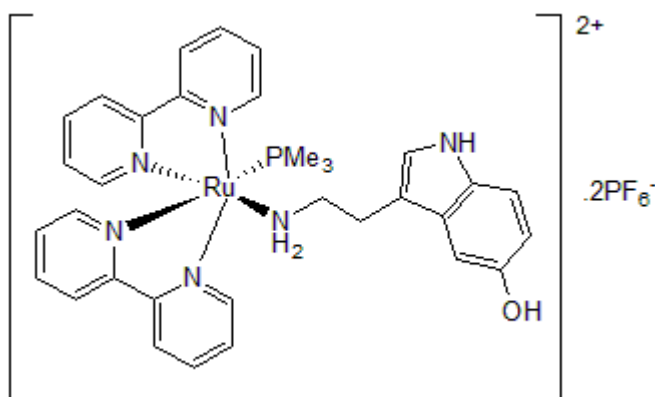
Batch Molecular Weight: 955.66

Physical Appearance: Orange solid

Solubility: Please refer to Solubility & Usage Information on Product Information sheet.

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

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

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Description:

RuBi-caged version of serotonin (Cat. No. 3547). Excited by visible wavelengths (450 nm). Has no effect on firing of pyramidal neurons in mice; uncaging with blue light alters firing rate of COM and CPn neurons, which is blocked by MDL 100907 (Cat. No. 4173).

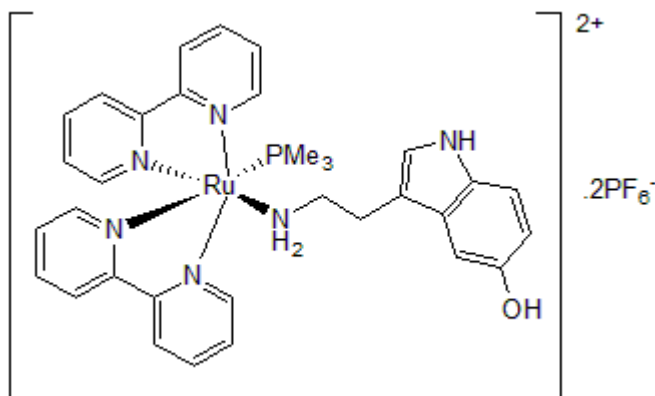
Physical and Chemical Properties:

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Solubility & Usage Info:

RuBi-5-HT is soluble in water, but its PF₆ salts are slow to solubilise. Please refer to the detailed solubility guidelines available on-line.

CAUTION: RuBi-5-HT is light sensitive and all experiments should be conducted with minimal light.

The material contains up to 15% trans complex. cis and trans complexes have similar photoactivity.

Licensing Information:

Sold under licence from Columbia University

References:

Cabrera et al (2017) A visible-light-sensitive caged serotonin. ACS Chem.Neurosci. **8** 1036. PMID: 28460173.

Zayat et al (2006) Ruthenium(II) bipyridyl complexes as photolabile caging groups for amines. Inorg. Chem. **45** 1728. PMID: 16471986.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956