

# **Certificate of Analysis**

Print Date: Sep 12th 2024

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Product Name: RuBi-GABA Catalog No.: 3400 Batch No.: 13

CAS Number: 1028141-88-9

IUPAC Name: (bis(2,2'-Bipyridine-N,N')triphenylphosphine)-4-aminobutyric acid ruthenium hexafluorophosphate complex

# 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{42}H_{39}F_6N_5O_2P_2Ru$ 

Batch Molecular Weight: 922.8

Physical Appearance: Orange solid
Storage: Store at -20°C

**Batch Molecular Structure:** 

## 2. ANALYTICAL DATA

<sup>1</sup>H NMR: Consistent with structure



# **Product Information**

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## **Description:**

RuBi-GABA is a ruthenium-bipyridine-triphenylphosphine caged GABA (Cat. No. 0344) that is excited by visible wavelengths. Provides greater tissue penetration, less phototoxicity, faster photorelease kinetics and better spatial resolution than UV light-sensitive caged compounds. Produces GABA receptor-mediated currents in pyramidal neurons in vitro and displays no effect on endogenous GABAergic or glutamatergic transmission at concentrations effective for uncaging.

## **Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>42</sub>H<sub>39</sub>F<sub>6</sub>N<sub>5</sub>O<sub>2</sub>P<sub>2</sub>Ru

Batch Molecular Weight: 922.8 Physical Appearance: Orange solid

#### **Batch Molecular Structure:**

#### Solubility & Usage Info:

RuBi-GABA is soluble in water, but its PF6 salts are slow to solubilise. To achieve concentrations of greater than 1mM (up to 10mM) please refer to the detailed solubility guidelines available on-line.

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

#### **Licensing Information:**

Sold under licence from Columbia University

#### References:

Rial Verde et al (2008) Photorelease of GABA with visible light using an inorganic caging group. Front.Neural Circuits 2 2. PMID: 18946542.

**Zayat** *et al* (2003) A new strategy for neurochemical photodelivery: Metal-ligand heterolytic cleavage. J.Am.Chem.Soc. *125* 882. PMID: 12537482.

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