

## Certificate of Analysis

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**Product Name:** TP 003

**Catalog No.:** 4414

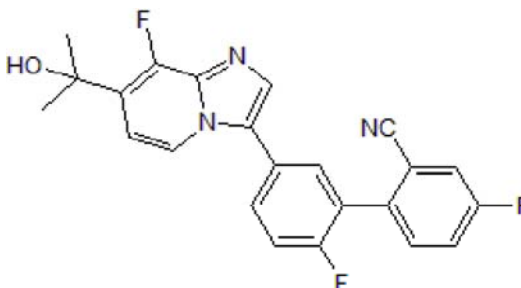
**Batch No.:** 2

CAS Number: 628690-75-5

IUPAC Name: 2',4-Difluoro-5'-[8-fluoro-7-(1-hydroxy-1-methylethyl)imidazo[1,2-a]pyridin-3-yl]-[1,1'-biphenyl]-2-carbonitrile

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>23</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O  
**Batch Molecular Weight:** 407.39  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 100 mM  
ethanol to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.4 (Dichloromethane:Methanol:Ammonia soln. [97.5:2.5])  
**HPLC:** Shows 98.5% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	67.81	3.96	10.31
Found	67.66	3.93	10.14

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

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**Description:**

TP 003 is a GABA<sub>A</sub> receptor partial agonist that demonstrates affinity for the benzodiazepine site. Potentiates GABA<sub>A</sub> α3 response with high efficacy. Produces anxiolytic-like effects in rodent elevated plus maze via action at GABA<sub>A</sub> α2 subtype receptors. Also evokes GABA<sub>A</sub> α1 mediated sedation and GABA<sub>A</sub> α3 mediated muscle relaxation in mice.

**Physical and Chemical Properties:**

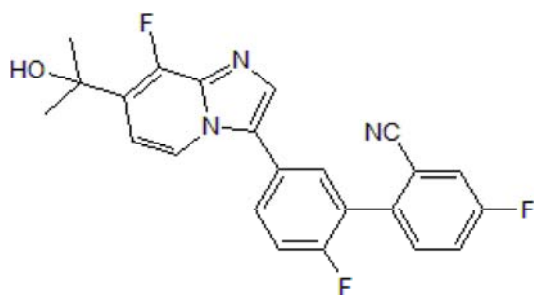
Batch Molecular Formula: C<sub>23</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O

Batch Molecular Weight: 407.39

Physical Appearance: Off White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 50 mM

**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:**

**Neumann et al** (2018) TP003 is a non-selective benzodiazepine site agonist that induces anxiolysis via α2GABA<sub>A</sub> receptors. *Neuropharmacology* **143** 71. PMID: 30240781 .

**Fischer et al** (2011) Contribution of GABA(A) receptors containing α3 subunits to the therapeutic-related and side effects of benzodiazepine-type drugs in monkeys. *Psychopharmacology (Berl.)* **215** 311. PMID: 21190016.

**Dias et al** (2005) Evidence for a significant role of α3-containing GABA<sub>A</sub> receptors in mediating the anxiolytic effects of benzodiazepines. *J.Neurosci.* **25** 10682. PMID: 16291941.

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