

## Certificate of Analysis

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**Product Name:** ETP 45835 dihydrochloride

**Catalog No.:** 5183

**Batch No.:** 1

**IUPAC Name:** 4-[5-(4-Piperidinyl)-1*H*-pyrazol-3-yl]pyridine dihydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>16</sub>N<sub>4</sub>·2HCl·½H<sub>2</sub>O

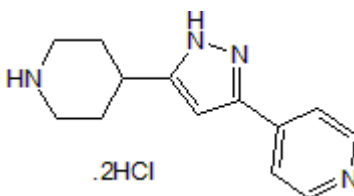
**Batch Molecular Weight:** 305.71

**Physical Appearance:** Pale yellow solid

**Solubility:** water to 100 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.15 (20% MeOH in DCM with 0.2% NH<sub>3</sub>)

**HPLC:** Shows 99.9% purity

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

**Mass Spectrum:** Consistent with structure

<b>Microanalysis:</b>	Carbon Hydrogen Nitrogen			
Theoretical	51.07	6.1	18.33	
Found	51.21	6.07	18.39	

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**R&D**  
SYSTEMS®

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**IUPAC Name:** 4-[5-(4-Piperidiny)-1H-pyrazol-3-yl]pyridine dihydrochloride

**Description:**

Mnk2 and Mnk1 inhibitor (IC<sub>50</sub> values are 575 and 646 nM respectively). Exhibits selectivity against a panel of 24 protein kinases, including those upstream of Mnk1/2.

**Physical and Chemical Properties:**

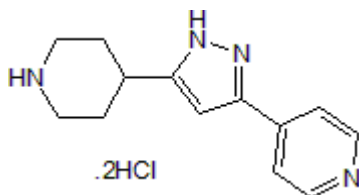
Batch Molecular Formula: C<sub>13</sub>H<sub>16</sub>N<sub>4</sub>·2HCl·½H<sub>2</sub>O

Batch Molecular Weight: 305.71

Physical Appearance: Pale yellow solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 100 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:**

**Oyarzabal et al** (2010) Discovery of mitogen-activated protein kinase-interacting kinase 1 inhibitors by a comprehensive fragment-oriented virtual screening approach. *J.Med.Chem.* **53** 6618. PMID: 20722422.

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