

**Product Name:** Akti-1/2

**Catalog No.:** 5773

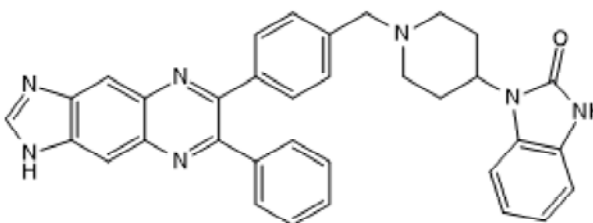
**Batch No.:** 4

CAS Number: 612847-09-3

IUPAC Name: 1,3-Dihydro-1-[1-[[4-(6-phenyl-1*H*-imidazo[4,5-*g*]quinoxalin-7-yl)phenyl]methyl]-4-piperidinyl]-2*H*-benzimidazol-2-one

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>34</sub>H<sub>29</sub>N<sub>7</sub>O·½H<sub>2</sub>O  
**Batch Molecular Weight:** 560.65  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 20 mM with gentle warming  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	72.84	5.39	17.49
Found	71.9	5.26	17.01

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

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**Description:**

Akti-1/2 is a potent and selective dual Akt1 and 2 inhibitor (IC<sub>50</sub> values are 50 and 210 nM, respectively). Selective for Akt1 and 2 over a panel of other tyrosine and serine/threonine kinases. Sensitizes LnCaP cells to TRAIL (TNF-related apoptosis-inducing ligand) induced apoptosis. Also enhances CAR and TCR retroviral transduction of human T cells. Active in vivo.

**Physical and Chemical Properties:**

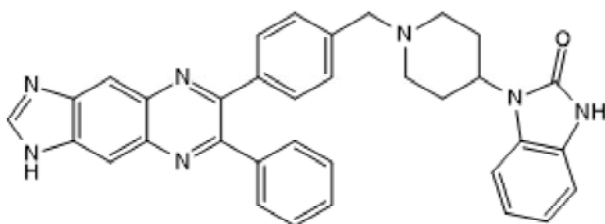
Batch Molecular Formula: C<sub>34</sub>H<sub>29</sub>N<sub>7</sub>O.½H<sub>2</sub>O

Batch Molecular Weight: 560.65

Physical Appearance: Yellow 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 20 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:**

**Klebanoff et al** (2017) Inhibition of AKT signaling uncouples T cell differentiation from expansion for receptor-engineered adoptive immunotherapy. *JCI Insight* **2** e95103. PMID: 29212954.

**Bain et al** (2007) The selectivity of protein kinase inhibitors: a further update. *Biochem.J.* **408** 297. PMID: 17850214.

**Barnett et al** (2005) Identification and characterization of pleckstrin-homology-domain-dependent and isoenzyme-specific Akt inhibitors. *Biochem. J.* **385** 399. PMID: 15456405.

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