

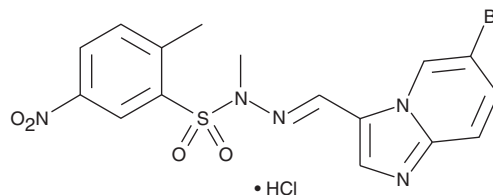
# PRODUCT INFORMATION



## PIK-75 (hydrochloride)

Item No. 10009210

**CAS Registry No.:** 372196-77-5  
**Formal Name:** 2-methyl-5-nitro-2-[(6-bromoimidazo[1,2-a]pyridin-3-yl)methylene]-1-methylhydrazide-benzenesulfonic acid, monohydrochloride  
**MF:** C<sub>16</sub>H<sub>14</sub>BrN<sub>5</sub>O<sub>4</sub>S • HCl  
**FW:** 488.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 215, 264, 272, 324 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

PIK-75 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the PIK-75 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. PIK-75 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PIK-75 (hydrochloride) in these solvents is approximately 0.25 and 0.5 mg/ml, respectively.

### Description

Phosphatidylinositol 3-kinase (PI3K) catalyzes the synthesis of the second messengers PtdIns-(3)-P, PtdIns-(3,4)-P<sub>2</sub>, and PtdIns-(3,4,5)-P<sub>3</sub>. The PI3K family of enzymes is comprised of 15 members that are divided into three classes according to their structure, substrate specificity, and mode of regulation.<sup>1</sup> In the class I PI3Ks, p110α is the primary PI3K isoform required for insulin signaling in adipocytes and myotubes and is frequently mutated in primary tumors.<sup>2</sup> Small molecule inhibitors of p110α are of interest in cancer treatment research. PIK-75 is an imidazopyridine that selectively inhibits p110α with an IC<sub>50</sub> value of 5.8 nM.<sup>2</sup> It inhibits p110γ and p110β considerably less effectively with IC<sub>50</sub> values of 0.076 μM and 1.3 μM, respectively.<sup>2</sup> In adipocytes and myotubes, PIK-75 blocks production of PIP<sub>2</sub> and/or PIP<sub>3</sub>, phosphorylation of Akt, and activation of mTORC1.<sup>2</sup>

### References

1. Carracedo, A. and Pandolfi, P.P. The PTEN-PI3K pathway: Of feedbacks and cross-talks. *Oncogene* **27**, 5527-5541 (2008).
2. Knight, Z.A., Gonzalez, B., Feldman, M.E., et al. A pharmacological map of the PI3-K family defines a role for p110α in insulin signaling. *Cell* **125**, 733-747 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/07/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM