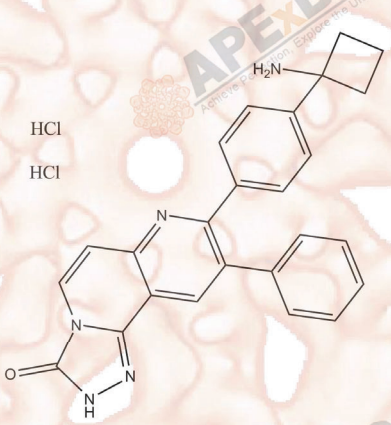
Product Data Sheet

MK-2206 dihydrochloride

Cat. No.:	A3010
CAS No.:	1032350-13-2
Formula:	C25H21N5O·2HCl
M.Wt:	480.39
Synonyms:	MK-2206,MK2206,MK 2206
Target:	PI3K/Akt/mTOR Signaling
Pathway:	Akt
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

⩾12.01mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	2.0816 mL	10.4082 mL	20.8164 mL
5 mM	0.4163 mL	2.0816 mL	4.1633 mL
10 mM	0.2082 mL	1.0408 mL	2.0816 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Akt1/2/3 inhibitor
IC_{50} & Target	8 nM (Akt1), 12 nM (Akt2), 65 nM (Akt3)

In Vitro

Cell Viability Assay

Cell Line:	Endometriotic stromal cells
Preparation method：	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions:	100 nM, 2h
Applications:	Inhibiting AKT with MK-2206 or MEK1/2 with U0126 for 24 hours in the

		absence of R5020 increased total and nuclear PRA and PRB protein levels in OSIS but not in eutopic endometrial stromal cells from disease-free patients from disease-free patients. MK-2206 and R5020 decreased OSIS viability and increased apoptosis. Trends toward decreased volumes of sc grafted endometriosis tissues were demonstrated with MK-2206 and progesterone.
In Vivo	**Animal experiment**	
	Animal models:	5-week-old CD-1 nude mice
	Dosage form:	360 mg/kg/d, 15 days, oral Gavage
	Applications:	No significant interaction between MK-2206 and progesterone (P=0.628). Trends toward decreased tumor volume were noted with MK-2206 (P=0.077) and progesterone (P=0.087). Treatment with MK-2206 decreased levels of Ki67. Levels of cleaved caspase-3 (CC3) were very low in E and E +P-treated grafts, whereas MK-2206 increased CC3 levels, especially in the presence of P.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Liu L, Zhang L, et al. "Non-canonical Notch Signaling Regulates Actin Remodeling in Cell Migration by Activating PI3K/AKT/Cdc42 Pathway." Front Pharmacol. 2019 Apr 16;10:370.PMID:31057403

2. Zhang XH, Li CY, et al. "Pro-angiogenic activity of isoliquiritin on HUVECs in vitro and zebrafish in vivo through Raf/MEK signaling pathway." Life Sci. 2019 Apr 15;223:128-136.PMID:30876941

3. Mao H, Tang Z, et al. "Neddylation inhibitor MLN4924 suppresses cilia formation by modulating AKT1." Protein Cell. 2019 Mar 9.PMID:30850948

4. Wang Q, Zhi Y, et al. "Suppression of OSCC malignancy by oral glands derived-PIP identified by iTRAQ combined with 2D LC-MS/MS." J Cell Physiol. 2019 Jan 28.PMID:30693510

5. Zhang B, Wang W, et al. "Inositol polyphosphate-4-phosphatase type II plays critical roles in the modulation of cadherin-mediated adhesion dynamics of pancreatic ductal adenocarcinomas." Cell Adh Migr. 2018 Aug 19:1-16.PMID:29952716

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References

1. Eaton JL1, Unno K, Caraveo M et al. Increased AKT or MEK1/2 activity influences progesterone receptor levels and localization in endometriosis. J Clin Endocrinol Metab. 2013 Dec;98(12):E1871-9.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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