

PI3K/Akt/mTOR Compound Library

Catalog No: #L1300

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Description

Product Name	PI3K/Akt/mTOR Compound Library
Brief Description	<p>The PI3K/AKT/mTOR pathway is an intracellular signaling pathway important in regulating the cell cycle. Therefore, it is directly related to cellular quiescence, proliferation, cancer, and longevity. Phosphatidylinositol 3-kinase (PI3K), AKT, a serine/threonine protein kinase also known as protein kinase B (PKB), and mammalian target of rapamycin (mTOR) are 3 major nodes in the pathway. PI3K activation phosphorylates and activates AKT, localizing it in the plasma membrane. AKT can have a number of downstream effects such as activating CREB, inhibiting p27, localizing FOXO in the cytoplasm, activating PtdIns-3ps, and activating mTOR which can affect transcription of p70 or 4EBP1. mTOR is a component of the PI3K/AKT cell survival pathway that monitors the availability of nutrients, mitogenic signals and cellular energy and oxygen levels, a major regulator of the autophagic process, and alterations in components of the mTOR pathway have a major role in tumor progression. Therefore, mTOR is an appealing therapeutic target in many tumors. Encouraging data from preclinical studies have offered new opportunities to fully exploit the therapeutic potential of mTOR targeting in cancer.</p> <p>The PI3K/Akt/mTOR Compound Library by SAB, containing 190 compounds targeting PI3K/Akt/mTOR signaling, can be used for high throughput screening and high content screening for new drugs.</p>
Storage	<p>Powder or pre-dissolved DMSO solutions in 96 well plate with optional 2D barcode. Shipped with blue ice;</p> <p>Stable for One year as powder, 6 months at -20 °C in DMSO or 12 months at -80 °C in DMSO</p>

Application Details

Number of Compounds: 190

Product Description

A unique collection of 190 compounds targeting PI3K/Akt/mTOR signaling for research in PI3K/Akt/mTOR signaling, and drug discovery in diseases involved with PI3K/Akt/mTOR signaling; Effective tool for studying cell growth, proliferation, and apoptosis; Targets include AKT, AMPK, mTOR, PI3K, ATR/ATM, etc; Detailed compound information with structure, target, activity, IC₅₀ value, and biological activity description; Structurally diverse, medicinally active, and cell permeable; NMR and HPLC validated to ensure high purity and quality

Note: This product is for in vitro research use only