Neural regeneration compound library

Catalog No: #L7700

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Description

Product Name	Neural regeneration compound library
Brief Description	It is well known that neurological diseases that affect the brain or other components of the central nervous system are among the most devastating and complex conditions plaguing mankind today. For thousands of years, damage to the adult central nervous system (CNS) in humans has been regarded as an oΩ½oΩ½ailment which cannot be treatedoΩ½oΩ½. In the adult mammalian CNS, most injured axons do not regenerate, reflecting a major hurdle for functional recovery after trauma. Numerous efforts over more than a century have been devoted to uncover the underlying mechanisms of regeneration failure. The discovery of neural and glial precursor cells in the adult brain and their ability to grow after injury trumped this assumption. However, in most cases, only small numbers of injured CNS axons can regenerate, consistent with the idea that lack of regeneration in the adult CNS is an intrinsic property of the injured neurons. Therefore, a major challenge has been to define the underlying cellular and molecular mechanisms that determine neuronal intrinsic regenerative ability, with the goal to construct a foundation for designing therapeutic neural repair strategies. Many signaling pathways (including Ras homolog gene/Rho-associated coiled coil-forming protein kinase (Rho-ROCK), Notch, MAPK, Wnt/oΩ½oΩ½-catenin, mTOR, and ephephrin) participate in and affect repair or regeneration of neurons and axons in the central nervous system. The cyclic adenosine monophosphate-protein kinase A (cAMP-PKA) and Rho-ROCK signaling pathways are key signal transduction pathways for regulating neural and axonal regeneration. SAB collects 149 compounds related to neuroregeneration as Neuroregeneration Compound Library, which can be used for screening of drugs that promote axonal growth and regeneration
Storage	Powder or pre-dissolved DMSO solutions in 96 well plate with optional 2D barcodeShipped with dry ice; Stable for One year as powder, 6 months at - 20 ° C in DMSO or 12months at -80 ° C in DMSO

Application Details

Number of Compounds:149

Product Description

A unique collection of 149 neuroregeneration related compounds for high throughput and high content screening; Targets several signaling pathways, such as Notch, MAPK, Wnt/oΩ½oΩ½-catenin, mTOR, etc.; Bioactivity and safety confirmed by pre-clinical research and clinical trials, and some of them are approved by FDA; Detailed compound information with structure, target, activity, IC50 value, and biological activity description; tructurally 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