Osteogenesis-related compound library

Catalog No: #L7900

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Description

Product Name	Osteogenesis-related compound library
Brief Description	Bone tissue is continuously remodeled through the concerted actions of bone cells, which include bone resorption by osteoclasts and bone formation by osteoblasts. The equilibrium between bone formation and resorption is necessary and depends on the action of several local and systemic factors including hormones, cytokines, chemokines, and biomechanical stimulation.An imbalance between bone resorption and formation can result in bone diseases including osteoporosis.Osteoblasts are the main functional cells of bone formation and are responsible for the synthesis, secretion and mineralization of bone matrix. Osteoblasts undergo four stages of osteoblast proliferation, extracellular matrix maturation, extracellular matrix mineralization, and osteoblast apoptosis during bone formation. Many factors are involved in these stages to ultimately regulate bone formation. Multiple signaling pathways were found to be involved in osteogenic proliferation and differentiation. Among them, BMP-SMAD, Wnt/oΩ½oΩ½-Catenin, Notch, Hedgehog, MAPK, and FGF signaling pathways play the most critical roles in regulating osteogenic differentiation. Osteogenesis Compound Library from SAB collects 80 reported osteogenesis related bioactive compounds that can be used for research in bone formation and drug screening.
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:80

Product Description

A unique collection of 80 osteogenesis related compounds for high throughput and high content screening; Targets several signaling pathways, such as BMP-SMAD, Notch, MAPK, Wnt/oΩ½oΩ½-catenin, Hedgehog, FGF, etc.; Effective tool for research in bone formation and related bone diseases, such as osteoporosis, bone tumor, etc.; Bioactivity and safety confirmed by pre-clinical research and clinical trials; Detailed compound information with structure, target, activity, IC50 value, and biological activity description; Structurally diverse, medicinally active, and cell permeable;

Note: This product is for in vitro research use only