

Natural Product Derivatives Library for CADD

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description

Natural products have been used in the treatment of disease since ancient times and have been the inspiration for modern drug discovery and development. In the past few decades, approximately 40% of FDA-approved marketed drugs have been natural products, natural product derivatives, or synthetic analogues related to natural products. Molecular scaffolds identified in natural products have significant structural diversity and drug-like properties, which can be used as a basis for designing structurally novel natural product derivatives.

With the development of high-throughput screening and virtual screening technologies, a large number of compounds can be analyzed for activity in a short period of time. However, due to difficulties in extraction and synthesis, natural products are usually limited in amounts, thus unable to go through screening studies as drug-like compounds. This problem has greatly hindered the development of natural product-related drugs.

Through combinatorial chemistry, a large number of derivatives and analogues can be synthesized using natural products as templates. Natural product derivatives can modify the intermediate structure while preserving the parent structure of the natural product, and by introducing different substituents, the loss of activity caused by the change of the parent structure can be avoided. Based on these advantages, natural product derivatives are more suitable for high-throughput screening and virtual screening.

Because of the great interest of our customers in the research of natural product derivatives, TargetMol® has carefully compiled the structure data of more than 163,000 natural product derivatives and provided them to our customers free of charge. All the structures included in the database have corresponding compounds supplied by TargetMol® that can be purchased for subsequent research studies. What's more, there is always a library customization service for our customers to design their own product derivative library.

Reference

Cell Stem Cell. 2022 Apr 29(4) 545-558.
Blood. 2021, 137(11): 1478-1490.
Nucleic Acids Research. 2021.
Nature Communications. 2023, 14(1): 7574.
Advanced Science. 2020, 7(16): 2000925.
Angewandte

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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