

# APExBIO

## *Compound Library Instructions*

**44+ Compound libraries / 22+ Signaling pathways / 400+ Targets**

### Instructions for Chemical Compound Library Handling

#### 1) How should the compound library be handled after receipt?

After receipt, briefly centrifuging the compound library plate before opening is recommended to ensure full recovery and minimize loss from adhesion to walls or caps.

#### 2) Is it necessary to aliquot the compound library?

For compound libraries with large fill volumes (e.g., ~100  $\mu$ L), stocks should be aliquoted into 20–30  $\mu$ L portions to minimize freeze–thaw cycles and reduce contamination risk. In other cases, aliquoting may be performed according to the experimental requirements. Automated liquid-handling systems are recommended if available.

#### 3) What is the shelf life and the storage condition of compound libraries?

The powder form can be stored at  $-20^{\circ}\text{C}$  for up to 3 years.

The solution form can be stored at  $-80^{\circ}\text{C}$  for approximately 1 year or at  $-20^{\circ}\text{C}$  for approximately 6 months.

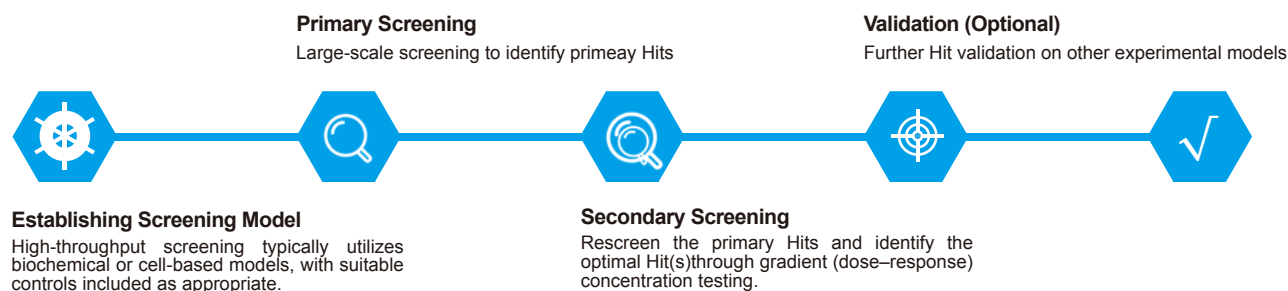
#### 4) What solvent and concentration are used for the compound libraries supplied in solution?

Most compounds in the ready-to-use library are supplied at 10 mM in DMSO, ethanol, or water, depending on solubility. Solvent information is provided in the product documentation. In most cases, DMSO is used because of its broad solubilizing capacity, antibacterial properties, high boiling point, and low volatility.

#### 5) How should compounds supplied in powder form be dissolved?

Powdered compounds should be dissolved before use, with the solvent (commonly DMSO, water, or ethanol) verified for solubility. Vortexing is optional to facilitate dissolution. For poorly soluble compounds, ultrasonic treatment at  $37^{\circ}\text{C}$  is recommended. Once fully dissolved, the solution should be briefly centrifuged, aliquoted, and stored following the guidelines for solution-based compound libraries.

## Screening Workflow of Compound Libraries



**Note:** Hits are compounds that show desired activity in a primary screening assay. To purchase specific compounds in large quantities, please contact APEXBio sales managers or agents.

## Frequently Asked Questions About Compound Libraries

### 1. What experimental models are commonly used in compound-screening assays?

Biochemical models (e.g., enzyme activity, receptor binding, ion channel assays) and cell-based models (e.g., cell viability/toxicity, cell cycle analysis, reporter gene assays) are commonly used in compound screening. Animal models are generally employed for subsequent validation of Hit compounds rather than for primary screening, due to their low throughput, long development cycles, and high cost.

### 2. How to set up controls in drug screening experiments?

Solvent and positive controls are essential. Solvent controls are treated only with the compound solvent (e.g., DMSO, water, or ethanol), whereas positive controls are treated with known compounds that act on the relevant target. Blank controls, which receive no compound treatment, are optional.

### 3. What is the typical concentration of compounds in primary screening?

Primary screening is typically conducted at a single, uniform compound concentration to enable large-scale screening. A standard final concentration is 10  $\mu$ M, achieved by adding 0.1% (v/v) of a 10 mM stock solution. Although concentrations may be optimized as needed, solvent levels (e.g., DMSO or ethanol) should not exceed 0.1% to avoid cytotoxicity.

## Custom Compound Library Service

For more exclusive experimental requirements, APEXBio offers custom compound library services with customizable in provision form/specification/concentration.



**Note:** Please submit your requirements to APEXBio sales managers or agents to have a customized, exclusive compound library prepared for you.

Website: [www.apexbt.com](http://www.apexbt.com)

Phone: +1-832-696-8203

Address: 7505 Fannin street, Suite 410, Houston, TX 77054, USA