

Product Handling Instructions

1 How to deal with the product after receiving?

The packaging of the product may have been turned upside down during transportation, resulting in the product adhering to the neck or cap of the vial. Take the vial out of its packaging and shake gently to let the product fall to the bottom of the vial. For liquid product, centrifuge it at 200-500 RPM to gather the liquid at the bottom of the vial. Try to avoid loss or contamination during handling.

TargetMol's products are usually obtained by chemical synthesis. **The products are not temperature-sensitive** because of the synthesis reactions are under 50-80 °C disposal. Therefore, there will be no negative influences on the products if the attached ice pack found melted. TargetMol will proceed special processing and provide specific descriptions on the product which requires low temperature transportation.

2 What is the range of the weighing errors for our product ?

Weighing Range	Error Range
5-25 mg	0.1 mg
50-500 mg	1 mg
>1 g	2-5 mg

3 How do you prepare stock solutions?

According to your experiment, select a suitable solvent to prepare a concentrated stock solution. Solubility information is tested by our Quality Control Department and can be found on the product page of our website. For in vitro experiments, DMSO is often used as the solvent. It is then diluted to make a working solution (e.g. 1:1000 dilution in cell culture medium).

If you are having difficulties in dissolving the product, we suggest you:

- (1) Recalculate the concentration of the stock solution, according to the following formula: the actual concentration (mg/mL) = molecular weight (g/mol) × concentration (mM) × 10⁻³
- (2) Check whether the solvent has been contaminated, e.g. DMSO absorbs moisture.
- (3) Some compounds are difficult to dissolve due to their structure or chemical characteristics and require additional mixing methods such as vortexing or ultrasonication. The compound may need to be ultrasonicated for 1h or overnight. If necessary, heat the compound no higher than 50 °C to prevent altering the product.
- (4) Send an email to tech@targetmol.com and let our tech support staff know if you cannot dissolve the product completely. We will try our best to provide additional assistance.

4 How do I store the product ?

Here are some general guidelines:

Storage	
	3 years -20 °C powder As a powder, the product can be stored at -20°C for up to 3 years.
	2 weeks 4 °C in solvent The product in solvent can be stored at 4°C for up to 2 weeks.
	6 months -80 °C in solvent The product in solvent can be stored at -80°C for up to 6 months.

Aliquot the stock solution to routine usage volumes and store at -20 °C or -80 °C. **Avoid repeated freezing and thawing.** Once thawed, the liquid may be kept at 4 °C for 2 weeks.

For any questions, please contact our technical support:
tech@targetmol.com

5 How to prepare the working solution?

(1) Calculate the dilution required by using our dilution calculator.
(2) Slowly add the stock solution into the solvent until obtaining the desired concentration. Mix by vortexing or repeated pipetting.

(3) Add a drop of working solution onto a slide and check whether there is precipitation under the microscope. If precipitation is present, allow the working solution to stand for 10 min, vortex or pipette and then recheck whether there is precipitation under the microscope. If precipitation still shows up, please send an email to tech@targetmol.com for help.

(4) **Our compounds are mainly liposoluble, so it is common that there is precipitation when diluted by aqueous solvent such as cell culture medium or PBS.** They can be completely dissolved by **ultrasonication**.

6 How do I sterilize the working solution?

We suggest you to use filters to sterilize the working solution. **DO NOT sterilize the working solution by autoclaving.**

7 What issues need special attention for cell-based assays?

(1) DMSO is used to prepare the stock solution in most cell-based assays. The stock solution is then diluted in the culture medium to prepare a working solution. Make sure the concentration of DMSO is < 0.3% to avoid poisoning the cells. Usually, a negative control in the experiment is the culture medium with DMSO at the same concentration.

(2) Our compounds are mainly liposoluble, so it is common that there is precipitation when diluted by the cell culture medium. However, they can be completely dissolved by ultrasonication. If there is still the precipitation, please send an email to tech@targetmol.com for help.

8 What issues need special attention for animal experiments?

(1) Our compounds are mainly liposoluble. If DMSO is used to prepare the stock solution and then diluted to prepare the working solution for animal experiments, it may not be possible to obtain the required doses. Instead, hydrotropy agents, such as sodium carboxymethyl cellulose (CMC-Na), Tween 80, or glycerol, are needed. Please send an email to tech@targetmol.com if you require further information.

(2) Drugs that are administered orally sometimes cannot be made into a clear solution due to limitations in solubility. It may not influence the efficacy of the drugs by gavage using suspensions or emulsions.

(3) If DMSO is used to prepare the stock solution, make sure the concentration of DMSO is < 5% to avoid toxicity.

(4) Conversion of different model animals is based on BSA:

Species	Weight (kg)	Body Surface Area (m ²)	Km factor
Dog	10	0.5	20
Monkey	3	0.24	12
Rabbit	1.8	0.15	12
Guinea pig	0.4	0.05	8
Rat	0.15	0.025	6
Mouse	0.02	0.007	3

Animal A (mg/kg) = Animal B (mg/kg) multiplied by $\frac{\text{Animal B } K_m}{\text{Animal A } K_m}$

Administration volumes considered good practice (and possible maximal dose volumes):

Species	Route and volumes (mL/kg)					
	Oral	s.c.	i.p.	i.m.	i.v. (bolus)	i.v. (slow inj.)
Mouse	10 (50)	10 (40)	20 (80)	0.05 (0.1)	5	(25)
Rat	10 (40)	5 (10)	10 (20)	0.1 (0.2)	5	(20)
Rabbit	10 (15)	1 (2)	5 (20)	0.25 (0.5)	2	(10)
Dog	5 (15)	1 (2)	1 (20)	0.25 (0.5)	2.5	(5)

9 What issues need attention for special products?

(1) For oily compounds, add DMSO to dissolve the compound and prepare a stock solution with a concentration according to the volume available. You do not need to weigh the compound.

(2) For unstable compounds, add nitrogen to the vial when preparing stock solutions.

10 What safety precautions I must take when using products from TargetMol?

You can download the material safety data sheet (MSDS) from the product page for hazard identifications, first aid measures, fire fighting measures, etc.

For any questions, please contact our technical support:
tech@targetmol.com

DRUG SCREENING EXPERT

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