

General instruction for compound handling

1. About product quality and QC data:

MedKoo 100% guarantees product quality. Each product and each batch have been carefully analyzed by NMR, HPLC and MS. Copies of analytical spectra can be downloaded from the product web page under “Quality data” section. Note: copies of analytical spectra may not be available if the product is being supplied by Medkoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is guaranteed.

2. Shipping conditions:

- A. MedKoo stable products are usually shipped at ambient temperature.
- B. Liquid or special products may be shipped with blue ice or Cooling Rack in a foam insulated box.
MedKoo products are relatively stable at room temperature. Their quality will not be affected if the blue ice melts upon receiving, and products can be used with confidence.
- C. Temperature sensitive products will be shipped with dry ice.

3. Storage conditions:

Recommended storage conditions and precautions regarding proper product handling are described in the product web page and also in the Certificate of Analysis (COA). Here are the general storage guidelines for MedKoo products:

Powder: -20°C for 3 years; 4°C for 2 years.

In solvent: -80°C for 6 months; -20°C for 1 month.

If the solution is stored at -20°C for more than one month, it should be re-examined to ensure its efficacy. Avoid repeated freeze and thaw cycles. Storage conditions for some special products should refer to their COAs.

4. What you should do before formulation or use:

During transportation, the compound may adhere to the neck or cap of the vial. Before opening the vial, please slightly tap the vial so as to release the product inside the vial, then centrifuge to gather the compound at the bottom of the vial.

5. How to prepare the compound stock solution?

Select the appropriate solvent for the preparation of stock solution based on your experiment needs. Solubility information is available at the product webpage. Currently we only offer solubility data in DMSO and/or water. For solubility in other solvents, please email tech@medkoo.com. Once prepared, aliquot the stock solution to routine usage volumes and store at -20°C or -80°C . Avoid repeated freeze and thaw cycles. Molarity Calculator from MedKoo official website is recommended for the related calculation.

6. About in vitro test using the product:

Stock solution using H_2O as a solvent can be directly diluted with medium to prepare the working solution. When DMSO is used to prepare the stock solution, the stock solution is diluted in the culture medium to prepare a working solution. Make sure the concentration of DMSO is $<0.5\%$ to avoid poisoning the cells. A negative control in the experiment is usually the culture medium with DMSO at the same concentration. It is recommended that the process of dilution is performed in a stepwise manner to avoid compound precipitation caused by fast change of concentration.

7. About in vivo test using the product:

Stock solution using H₂O as a solvent can be directly diluted with PBS or 0.9% NaCl to prepare the working solution. Stock solution using DMSO as a solvent can also be diluted with PBS or 0.9% NaCl to prepare the working solution. In order to reduce its toxicity to animals, the final concentration of DMSO in working solution should preferably be 2% or lower. When precipitates form during the dilution process due to their low water solubility, you can also use a co-solvent to help dissolve the compound. Common co-solvents contain glycerol, Tween 80, sodium carboxymethylcellulose (CMC-Na), cyclodextrin, PEG400, etc. A suspension can also be used for oral or intraperitoneal injection. For hydrophobic drugs, customer may also consider to use lipid formulation. Please send an email to tech@medkoo.com if you need further assistance.

Methods of administration and solvent preparation used in publications may be available at the product webpage. MedKoo has not independently confirmed the accuracy of these methods and they are distributed for reference only. It is strongly recommended that customer carefully read literature methods/protocols before designing your own method for in vivo study.

8. Is MedKoo compound sterile?

DMSO itself is strongly bactericidal and will not introduce bacteria to compounds. It is however important to keep the operating environment and the instrument be sterilized before experimental use. Compounds can also be sterilized by filtration prior to use depending on specific experimental requirements. High temperature and high pressure sterilization are NOT recommended.

9. Our Product Portfolio:

- (1) small molecule drugs that were approved, disapproved, and withdrawn from the market;
- (2) drug candidates that were entered into pre-clinical studies and clinical trials;
- (3) various inhibitors; activators, agonists, antagonists;
- (4) tool molecules, enzyme substrates, various dyes, fluorescent probes, imaging agents;
- (5) bioactive small molecules that were reported in peer-reviewed research publications;
- (6) photosensitizers for photodynamic therapy research;
- (7) cross-linkers for click chemistry, bioconjugate synthesis, drug delivery and antibody-drug conjugation (ADC);
- (8) new reagents for drug formulation, targeted drug delivery, nanomedicine formulation;
- (9) new reagents for DNA, RNA, gene and vaccine delivery;
- (10) other biochemicals and pharmaceutical related chemicals.