MOLNOVA

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MOLNOVA
HIT YOUR RESEARCH TO LEAD

Compounds Handling Instructions

1. Do you provide quality assurance for products?

All the products will be sent with COA, HPLC/MS and NMR inspection report to identify the quality.

2. What are the shipping conditions of Molnova products?

Molnova stable products are shipped at room temperature. Liquid or special products are shipped with blue ice or Cooling Pack in a foam holding box. Molnova products are relatively stable at room temperature. Their quality will not be affected if the ice melts upon receiving, and products can be used with confidence.

3. What are the proper storage guidelines for Molnova products?

General storage guidelines for compounds:

Powder:		Solvent:	
-20°C	3 years	-80°C	6 months
4°C	2 years	-20°C	1 month

If the solution is stored at -20°C for more than one month, it should be re-examined to ensure its efficacy. Make sure to avoid repeated freeze and thaw cycles.

4. How can I prepare compounds for Use?

- Store the remaining peptide in a freezer, preferably below -20℃, under dry conditions.
- Use sterile buffers to dissolve your compound.
- Filter your peptide using a 0.2 μm filter to remove bacterial contamination.
- Avoid repeated freeze-thaw cycles.
- Aliquot your compound solution according to daily experimental needs.
- DON'T store compound long-term in solution.
- DON'T repeatedly open the stock compound vial.

5. How to dissolve compounds in DMSO?

DMSO is used frequently in cell banking applications as a cryoprotectant because it prevents intracellular and extracellular crystals from forming in cells during the freezing process. For most cryopreservation applications, DMSO is used at the concentration of 10%, and is usually combined with saline or serum albumin.

Compounds can be dissolved easily in DMSO. However, DMSO might be cytotoxic to cells, even though DMSO increases cell permeability. High concentrations of DMSO should never be used for cell culture. Most cell lines can tolerate 0.5% DMSO, and some cells can tolerate up to 1%. However, primary cell cultures are far more sensitive. Therefore, if you are using primary cells a dose-response curve (viability), it should be performed with DMSO concentrations <0.1%.

6. How do I use these compounds during animal experiments?

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.

Conversion of different model animals based on BSA:

Species	Weight (kg)	Body Surface Area (m^2)	K_m factor
Dog	10	0.5	20
Rabbit	1.8	0.15	12
Guinea pig	0.4	0.05	8
Rat	0.15	0.025	6
Hamster	0.08	0.02	5
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)

7. Whether the products can be used for cell experiment without sterilization process?

Our products are not in aseptic condition. We cannot guarantee that the products won't contaminate your cells. However, a few precautions tips are proposed to avoid: First, the media must contain ampicillin which can effectively avoid most bacterial contamination. In addition, dissolve our products with pure DMSO or ethanol can be a good way to sterilize the products. Finally, all the experiments should be kept in a sterile environment.

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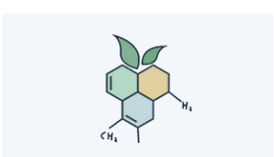

Natural products

MOLNOVA products for research only

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