

ab141290

Dynole -2-24™

Instructions for Use

This product is for research use only and is not intended for diagnostic use.

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1. Introduction

Dynole 2-24TM is a novel, potent dynamin I and II inhibitor (IC₅₀ values are 0.56 and 5.4 μM respectively). It is a second generation indole based dynamin inhibitor and is a highly potent inhibitor of clathrin mediated endocytosis (IC₅₀ 1.9 μM). It also displays a low cell toxicity profile.

Gordon *et al.* Development of second generation indole based dynamin GTPase inhibitors. *J Med Chem* (2013) **56**:46-59

2. Storage and Handling

Dynole 2-24TM is provided as a solution in 100% DMSO at a concentration of 50 mM.

This stock solution is stable at -20°C for 2-4 weeks.

Storage:

For long term storage, aliquots of the Dynole 2-24TM stock solution should be stored at -20°C and under inert conditions (i.e. argon or nitrogen).

Stock solutions should not be left at room temperature for longer than necessary to prepare the working solutions. Avoid freeze/thaw cycles of the stock solution as this may affect the activity of the compound. Minimise light exposure as the compound might be light sensitive.

Freezing solutions may lead to precipitation of the product from solution. When using, ensure that the solution equilibrates to room temperature, is fully melted and any precipitated solid has been fully re-dissolved before use.

3. Preparation of working Solutions

- Dynole 2-24TM is provided as a solution in 100% DMSO at a concentration of 50 mM.
- Dynole 2-24TM can be directly diluted in aqueous media to the final working concentration and is compatible with a range of buffers.
- For cell culture experiments, dilution of the compound to 10-30 μ M in a final concentration of 1%DMSO/PBS or media is recommended for use.
- Where possible, compounds should ideally be dosed in a serum free or minimum (0.1%) serum environment to minimise potential for compound-serum quenching/ binding.

The effect of storage and the re-use of the working solutions after dilution in aqueous buffers has not been investigated and is not recommended.

4. Guidelines for *in vitro* use

1. For *in vitro* enzymatic experiments, a 1-3% DMSO final concentration is possible as in the experience of the inventors of Dynole 2-24TM. 3% DMSO is the maximum tolerable concentration for most enzymes.

However, for best results, it is always recommended to perform a DMSO dose titration to determine the maximum tolerable amount of DMSO for the enzyme of interest.

After this amount of DMSO is determined, use this amount (or a sub maximum amount) in your experiment to keep the compound in solution.

2. For in cell experiments, cells should be grown to at least 70-90% confluence. The media should then be removed and a serum-free media applied for 4-12 hours before exposing cells to Dynole 2-24TM.

It is recommended to keep the final concentration of DMSO to about 1% to keep the compound in solution. Most cell lines can tolerate this amount of DMSO.

3. Dynole 2-24TM may be sequestered by serum albumins. In cell experiments, up to 0.1% serum can be tolerate. However this has not been extensively investigated.
4. In testing Dynole-2-24TM in U2OS cells, the compound was found to cause the cells to lift off the tissue culture flask at

relatively low concentrations. 10 μM caused 50% of cells to lift and 30 μM caused 100% of cells to lift. This effect may be cell type specific, and the potency of the compound to cause lifting may vary in different cell lines. To minimise cells lifting, users should perform titration experiments in their own cell systems.

For technical questions please do not hesitate to contact us by email (technical@abcam.com) or phone (select “*contact us*” on www.abcam.com for the phone number for your region).

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