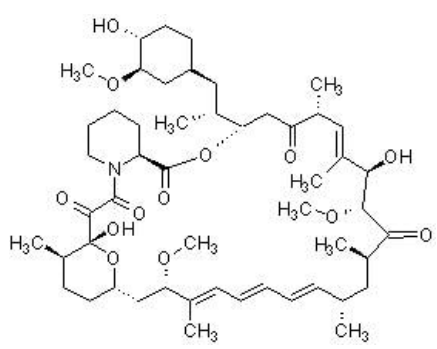


Rapamycin, mTORC1 complex inhibitor ab120224

[18 References](#) [2 Images](#)

Overview

Product name	Rapamycin, mTORC1 complex inhibitor
Description	mTORC1 complex inhibitor
Biological description	mTORC1 complex inhibitor. Binds with FKBP-12 to inhibit mTOR (mammalian target of rapamycin) C1 signaling. Induces autophagy <i>in vitro</i> and <i>in vivo</i> .
CAS Number	53123-88-9
Chemical structure	

Properties

Chemical name	(3 <i>S</i> ,6 <i>R</i> ,7 <i>E</i> ,9 <i>R</i> ,10 <i>R</i> ,12 <i>R</i> ,14 <i>S</i> ,15 <i>E</i> ,17 <i>E</i> ,19 <i>E</i> ,21 <i>S</i> ,23 <i>S</i> ,26 <i>R</i> ,27 <i>R</i> ,34 <i>aS</i>)-9,10,12,13,14,21,22,23,24,25, 26,27,32,33,34,34 <i>a</i> -Hexadecahydro-9,27-dihydroxy-3-[(1 <i>R</i>)-2-[(1 <i>S</i> ,3 <i>R</i> ,4 <i>R</i>)-4-hydroxy-3-methoxycyclohexyl]-1-methylethyl]-10,21-dimethoxy-6,8,12,14,20,26-hexamethyl-23,27-epoxy-3 <i>H</i> -pyrido[2,1- <i>c</i>][1,4]oxaazacyclohentriacontine-1,5,11,28,29(4 <i>H</i> ,6 <i>H</i> ,31 <i>H</i>)-pentone
Molecular weight	914.18
Molecular formula	C ₅₁ H ₇₉ NO ₁₃
PubChem identifier	9854380
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in DMSO to 50 mM
Handling	Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and

prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

Toxic, refer to SDS for further information.

Need more advice on solubility, usage and handling? Please visit our [frequently asked questions \(FAQ\) page](#) for more details.

SMILES

```
O[C@@H]1CC[C@@H](C[C@H]1OC)C[C@@H](C)[C@H]2OC(=O)
[C@@H]4CCCCN4C(=O)C(=O)[C@]3(O)O[C@H](C[C@H](OC)C(C)=CC=CC=C[C@@H]
(C)C[C@@H](C)C(=O)[C@H](OC)[C@H](O)C(C)=C[C@@H](C)C(=O)C2)CC[C@H]3C
```

Source

Synthetic

Applications

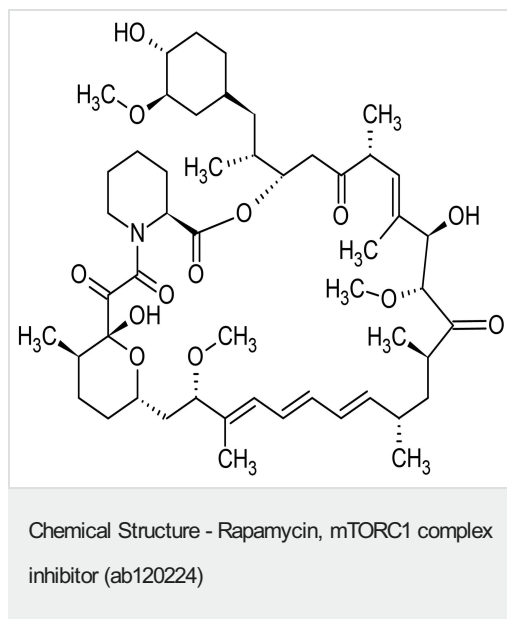
The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab120224 in the following tested applications.

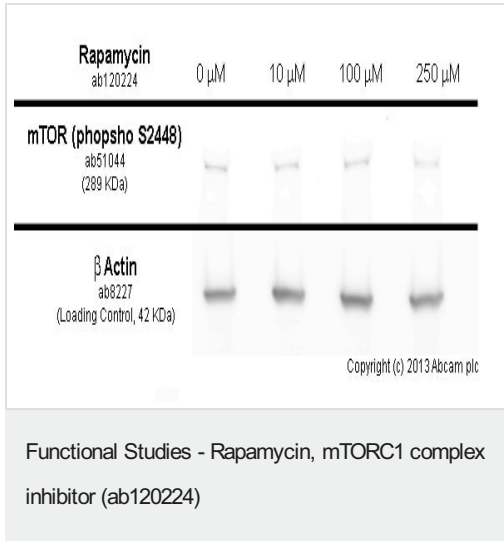
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



2D chemical structure image of ab120224, Rapamycin, mTORC1 complex inhibitor



MCF7 cells were incubated at 37°C for 1h with vehicle control (0 μ M) and different concentrations of rapamycin (ab120224).

Decreased expression of mTOR (phospho S2448) (**ab51044**) in MCF7 cells correlates with an increase in rapamycin concentration, as described in literature.

Whole cell lysates were prepared with RIPA buffer (containing protease inhibitors and sodium orthovanadate), 30 μ g of each were loaded on the gel and the WB was run under reducing conditions. After transfer the membrane was blocked for an hour using 5% BSA before being incubated with **ab51044** at 1 μ g/ml and **ab8227** at 1 μ g/ml overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP (**ab97051**) at 1/10000 dilution and visualised using ECL development solution.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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