

Tunicamycin, Protein glycosylation inhibitor ab120296

[25 References](#) [3 Images](#)

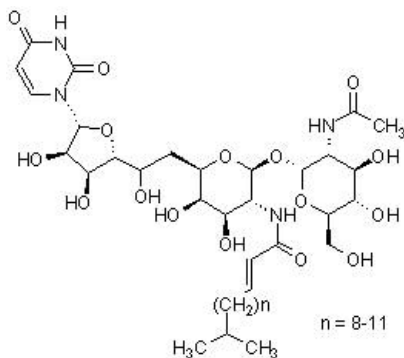
Overview

Product name	Tunicamycin, Protein glycosylation inhibitor
Description	Antibiotic. Protein glycosylation inhibitor.
Biological description	Nucleoside antibiotic that inhibits protein glycosylation. Inhibits GlcNAc phosphotransferase (GPT) and inhibits the transfer of <i>N</i> -acetylglucosamine-1-phosphate from UDP- <i>N</i> -acetylglucosamine to dolichol phosphate in the first step of glycoprotein synthesis. Inhibits <i>N</i> -linked glycosylation and blocks the formation of <i>N</i> -glycosidic protein-carbohydrate linkages. Active <i>in vitro</i> against Gram-positive bacteria, yeasts, fungi and viruses.

General notes This compound is a mixture of the homologs of tunicamycin: A, B, C and D which vary in the carbon chain length (n=8 to 11)

CAS Number 11089-65-9

Chemical structure



Properties

Molecular weight	844.95
Molecular formula	C ₃₉ H ₆₄ N ₄ O ₁₆ (for tunicamycin C, n = 10)
PubChem identifier	16220051
Storage instructions	Store at +4°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

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CC(C)CCCCCCC/C=C/C(=O)N[C@@H]1[C@H]([C@H]([C@H](O[C@H]1O[C@H]2[C@H]([C@@H]([C@H]([C@@H](O2)CO)O)O)NC(=O)C)[C@H]([C@@H]3[C@H]([C@H]([C@@H]([C@@H](O3)N4C=CC(=O)NC4=O)O)O)O)O)O
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Source

Streptomyces sp.

Applications

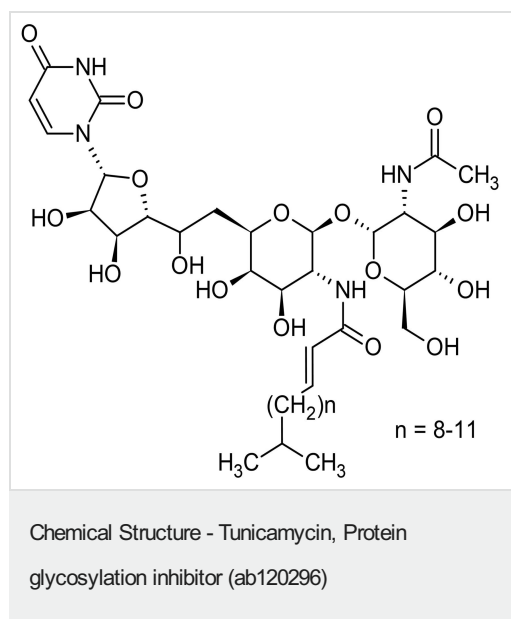
The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab120296 in the following tested applications.

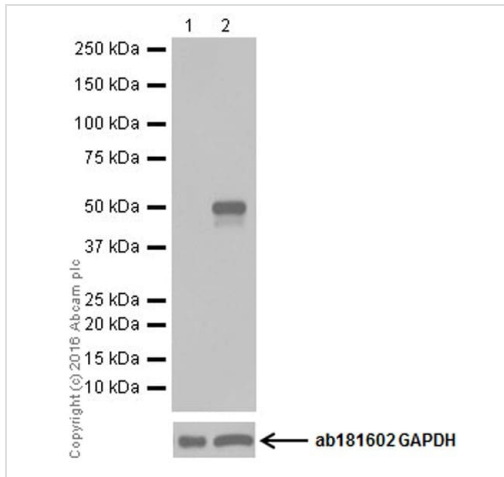
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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

Images



2D chemical structure image of ab120296, Tunicamycin, Protein glycosylation inhibitor



Western blot - Tunicamycin, Protein glycosylation inhibitor. (ab120296)

All lanes : Anti-ATF-4 antibody [EPR18111] ([ab184909](#)) at 1/1000 dilution

Lane 1 : Untreated HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate (control)

Lane 2 : HepG2 (Human liver hepatocellular carcinoma cell line) treated with 5 μ M MG-132 ([ab141003](#)) and 3 μ g/ml tunicamycin (ab120296) for 6 hours whole cell lysate

Lysates/proteins at 20 μ g per lane.

Secondary

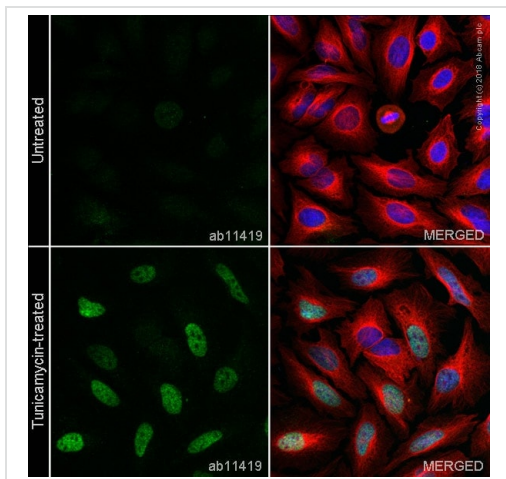
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 50 kDa

Exposure time: 15 seconds

Blocking/Dilution buffer: 5% NFDm/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 22095285).



Immunocytochemistry - Tunicamycin, Protein glycosylation inhibitor (ab120296)

ab11419 staining DDIT3 in HeLa (Human epithelial cell line from cervix adenocarcinoma) cells +/- Tunicamycin 1.5 μ M, 6 hours (ab120296).

The cells were fixed with 4% PFA (10 min), permeabilized with 0.1% Triton-X for 5 mins and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at +4°C with **ab11419** at 5 μ g/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control, at 1/1000 dilution. Cells were then incubated with **ab150117**, Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and **ab150084**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolor red). Nuclear DNA was labeled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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