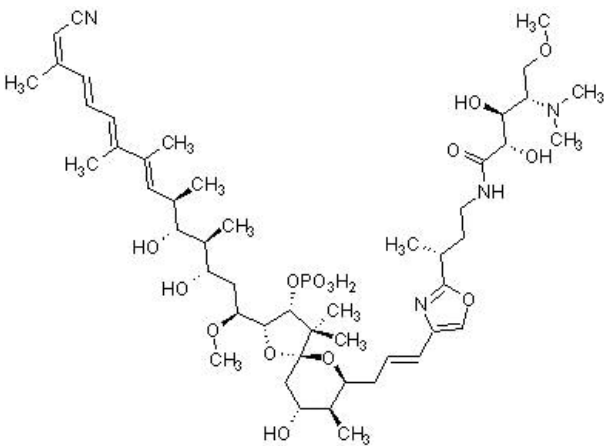


Calyculin A, protein phosphatase inhibitor ab141784

[13 References](#) [8 图像](#)

概述

产品名称	Calyculin A,蛋白phosphatase抑制剂
描述	Potent, selective and cell-permeable蛋白phosphatase抑制剂
纯度	> 98%
CAS编号	101932-71-2
化学结构	

性能

化学名称	[(2 <i>R</i> ,3 <i>R</i> ,5 <i>R</i> ,7 <i>R</i> ,8 <i>S</i> ,9 <i>S</i>)-2-[(1 <i>S</i> ,3 <i>S</i> ,4 <i>S</i> ,5 <i>R</i> ,6 <i>R</i> ,7 <i>E</i> ,9 <i>E</i> ,11 <i>E</i> ,13 <i>Z</i>)-14-Cyano-3,5-dihydroxy-1-methoxy-4,6,8,9,13-pentamethyltetradeca-7,9,11,13-tetraenyl]-9-[(<i>E</i>)-3-[2-[(2 <i>S</i>)-4-[[[(2 <i>S</i> ,3 <i>S</i> ,4 <i>S</i>)-4-(dimethylamino)-2,3-dihydroxy-5-methoxypentanoyl]amino]butan-2-yl]-1,3-oxazol-4-yl]prop-2-enyl]-7-hydroxy-4,4,8-trimethyl-1,10-dioxaspiro[4.5]decan-3-yl] dihydrogen phosphate
分子量	1009.18
分子式	C ₅₀ H ₈₁ N ₄ O ₁₅ P
PubChem识别号	5311365
存放说明	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
溶解度概述	Soluble in ethanol and in DMSO
处理	This product is supplied in one (or more) pack size which is freeze dried. Therefore the contents may not be readily visible, as they can coat the bottom or walls of the vial. Please see our FAQs and information page for more details on 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.

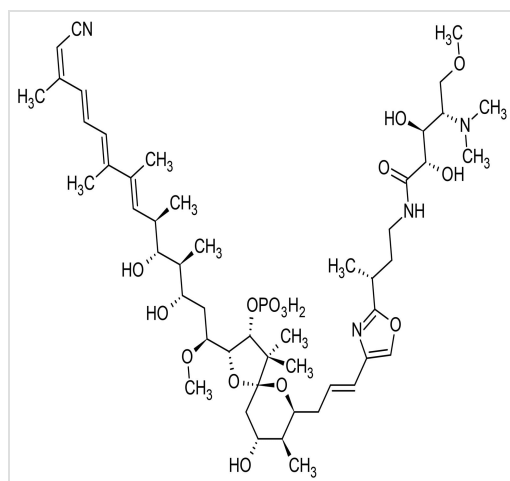
SMILES

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来源

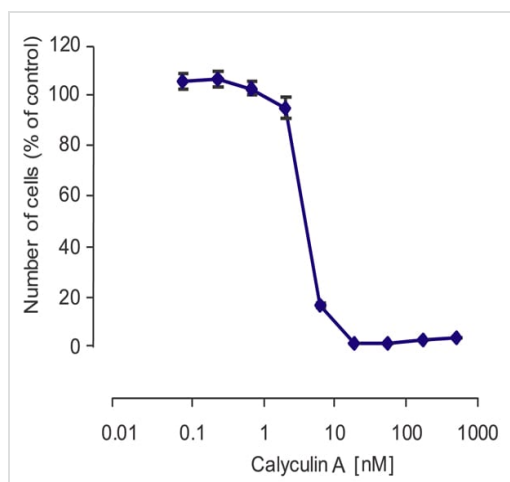
Discodermia calyx

图片



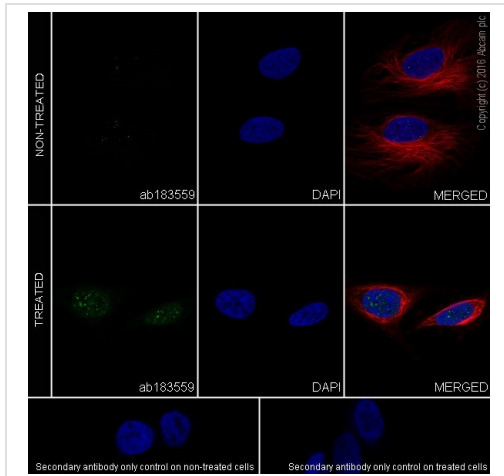
2D chemical structure image of ab141784, Calyculin A, protein phosphatase inhibitor

Chemical Structure - Calyculin A, protein phosphatase inhibitor (ab141784)



Functional Studies - Calyculin A, protein phosphatase inhibitor (ab141784)

Calyculin A inhibits the growth of breast cancer epithelial MCF7 cells. Cells were incubated with different concentrations of Calyculin A (ab141784) for four days. Cell number was measured using the methylene blue method. The number of cells was normalized with respect to the control (100%) and plotted against Calyculin A concentrations.



Immunocytochemistry/ Immunofluorescence -
Calyculin A, protein phosphatase inhibitor
(ab141784)

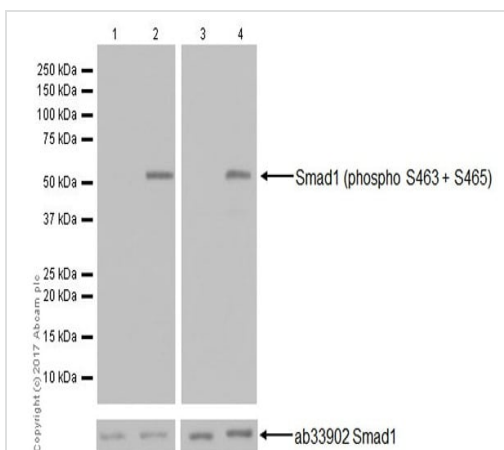
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling NF-kB p65 (phospho S276) with **ab183559** at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

The expression increased on HeLa cells after treatment with Calyculin A (ab141784 100ng/ml, 10min) then TNF-a (20ng/ml, 5min).

The nuclear counter stain is DAPI (blue).

Tubulin is detected with **ab195889** (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.



Western blot - Calyculin A, protein phosphatase inhibitor (ab141784)

All lanes : Anti-Smad1 (phospho S463 + S465) antibody [EPR20662-20] (**ab226821**) at 1/1000 dilution

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) grown in serum-free media overnight, whole cell lysate

Lane 2 : HeLa grown in serum-free media overnight, then treated with 100 ng/ml Calyculin A (ab141784) for 15 minutes, followed by Calyculin A removal and treatment with 100 ng/ml BMP2 for 30 minutes, whole cell lysate

Lane 3 : NIH/3T3 (mouse embryo fibroblast cell line) grown in serum-free media overnight, whole cell lysate

Lane 4 : NIH/3T3 cultured in serum-free media overnight, then treated with 50 ng/ml BMP2 for 30 minutes, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

Developed using the ECL technique.

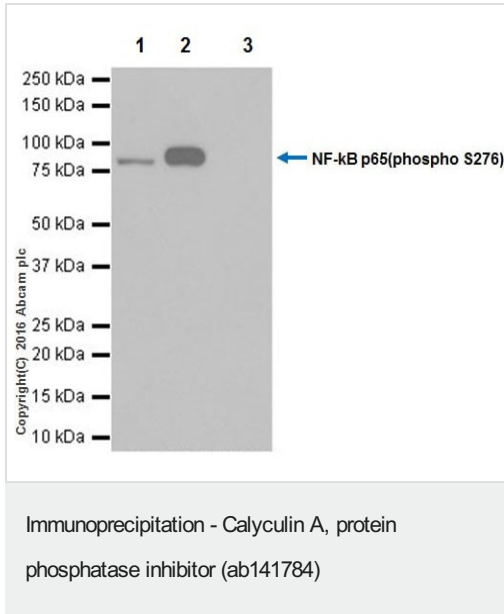
Observed band size: 60 kDa

Exposure time:

Lanes 1 and 2: 3 minutes.

Lanes 3 and 4: 30 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.



NF-kB p65 (phospho S276) was immunoprecipitated from 0.35 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysates, treated with 100ng/ml Calyculin A (ab141784) for 10min, then 20ng/ml TNA-a for 5min, with **ab183559** at 1/40 dilution. Western blot was performed from the immunoprecipitate using **ab183559** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

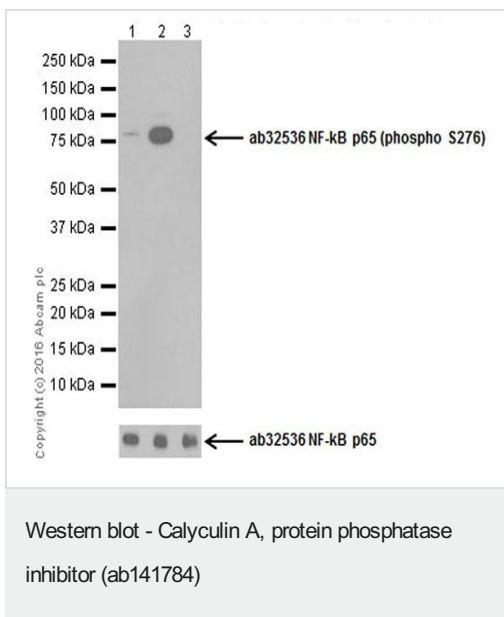
Lane 1: HeLa whole cell lysate treated with 100ng/ml Calyculin A (ab141784) for 10min, then 20ng/ml TNA-a for 5min, 10 µg (Input).

Lane 2: **ab183559** IP in HeLa whole cell lysate treated with 100ng/ml Calyculin A (ab141784) for 10min, then 20ng/ml TNA-a for 5min.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab183559** in HeLa whole cell lysate treated with 100ng/ml Calyculin A (ab141784) for 10min, then 20ng/ml TNA-a for 5min.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.



All lanes : Anti-NF-kB p65 (phospho S276) antibody [EPR17622] (**ab183559**) at 1/1000 dilution

Lane 1 : Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

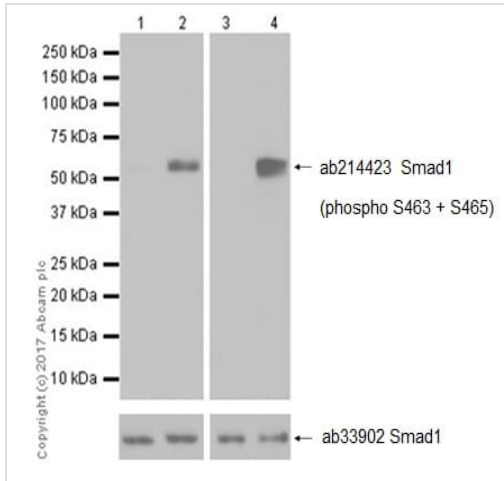
Lane 2 : HeLa whole cell lysate treated with 100ng/ml Calyculin A ab141784 for 30 minutes, then treated with 20ng/ml TNF-a for 5 minutes

Lane 3 : HeLa whole cell lysate treated with 100ng/ml Calyculin A ab141784 for 30 minutes, then treated with 20ng/ml TNF-a for 5 minutes, then treated with Alkaline Phosphatase for 1 hour

Lysates/proteins at 10 µg per lane.

Secondary

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



Western blot - Calyculin A, protein phosphatase inhibitor (ab141784)

All lanes : Anti-Smad1 (phospho S463 + S465) antibody [EPR20662-29] ([ab214423](#)) at 1/1000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma epithelial cell) grown in serum-free media overnight, whole cell lysate

Lane 2 : HeLa grown in serum-free media overnight, then treated with 100ng/ml Calyculin A (ab141784) for 15 minutes, Calyculin A was removed, followed by treatment with 100ng/ml BMP2 for 30 minutes, whole cell lysate

Lane 3 : NIH/3T3 (mouse embryonic fibroblast) grown in serum-free media overnight, whole cell lysate

Lane 4 : NIH/3T3 grown in serum-free media overnight, then treated with 50ng/ml BMP2 for 30 minutes, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

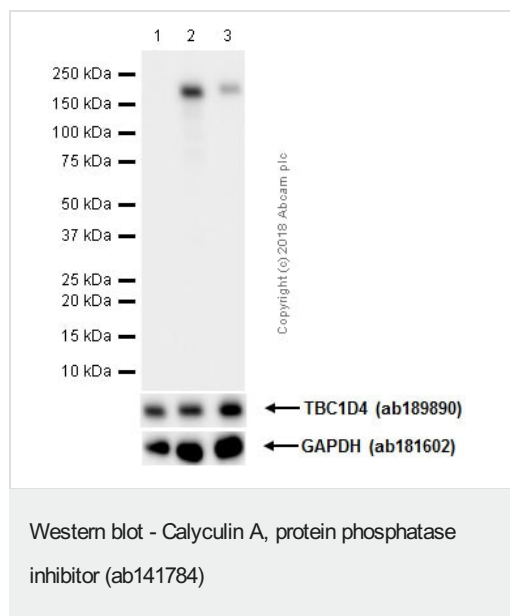
Developed using the ECL technique.

Performed under reducing conditions.

Observed band size: 60 kDa

Exposure time: 10 seconds

Blocking/Dilution: 5% NFDM/TBST.



All lanes : Anti-AS160 (phospho T642) antibody [EPR2733(2)] (**ab131214**) at 1.12 µg/ml

Lane 1 : HEK-293 (human embryonic kidney epithelial cell) grown in serum free media overnight whole cell lysate

Lane 2 : HEK-293 grown in serum free media overnight, then treated with 100nM Calyculin A (ab141784) for 50min and then 100ng/ml Insulin was added for the last 20min, whole cell lysate

Lane 3 : HEK-293 grown in serum free media overnight, then treated with 100nM Calyculin A (ab141784) for 50min and then 100ng/ml Insulin was added for the last 20min, whole cell lysate. Then the membrane was incubated with alkaline phosphatase

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Blocking and diluting buffer: 5% NFDM/TBST.

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