

Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore ab120116

[9 References](#) [12 图像](#)

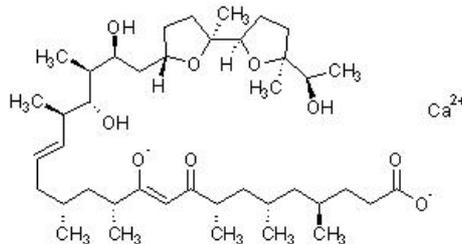
概述

产品名称 Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore

描述 Ca²⁺ ionophore

CAS编号 56092-82-1

化学结构



性能

化学名称 (4*R*,6*S*,8*S*,10*Z*,12*R*,14*R*,16*E*,18*R*,19*R*,20*S*,21*S*)-11,19,21-Trihydroxy-4,6,8,12,14,18,20-heptamethyl-22-[(2*S*,2'*R*,5*S*,5'*S*)-octahydro-5'-[(1*R*)-1-hydroxyethyl]-2,5'-dimethyl[2,2'-bifuran]-5-yl]-9-oxo-10,16-docosadienoic acid calcium salt

分子量 747.08

分子式 C₄₁H₇₀CaO₉

PubChem识别号 6446270

存放说明 Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months.

溶解度概述 Soluble in DMSO to 25 mM and in ethanol to 100 mM

处理 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.

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

[Ca+2].[O-]C(=O)CC[C@@H](C)C[C@H](C)C[C@H](C)C(=O)C=C([O-])[C@H](C)C[C@H]

(C)CC=C[C@@H](C)[C@@H](O)[C@@H](C)[C@@H](O)C[C@@H]1CC[C@](C)(O1)
[C@H]2CC[C@](C)(O2)[C@@H](C)O

来源

Streptomyces conglobatus

应用

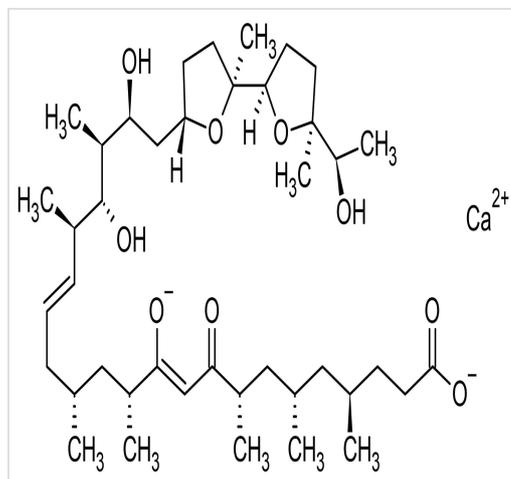
The Abpromise guarantee

Abpromise™承诺保证使用ab120116于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

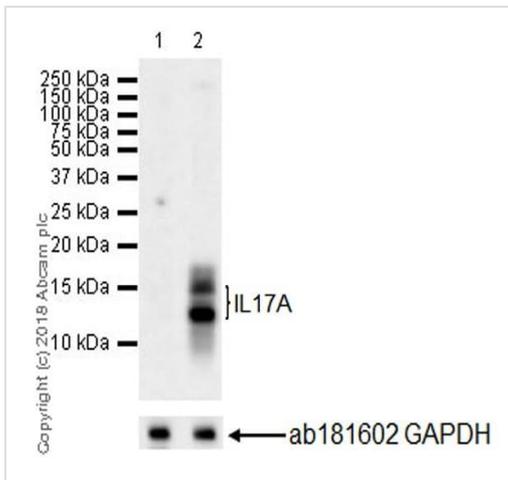
应用	Ab评论	说明
Functional Studies		Use at an assay dependent concentration.

图片



2D chemical structure image of ab120116, Ionomycin Ca²⁺ Salt,
Ca²⁺ ionophore

Chemical Structure - Ionomycin Ca²⁺ Salt, Ca²⁺
ionophore (ab120116)



Western blot - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

All lanes : Anti-IL-17A antibody [EPR21776] (**ab218013**) at 1/1000 dilution

Lane 1 : Untreated EL4 (mouse lymphoma T lymphocyte) whole cell lysate

Lane 2 : EL4 treated with 50 ng/ml Phorbol-12-myristate-13-acetate (PMA) and 500 ng/ml ionomycin (ab120116) for 6 hours, then with 500 ng/ml Brefeldin A for 18 hours, whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

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

Developed using the ECL technique.

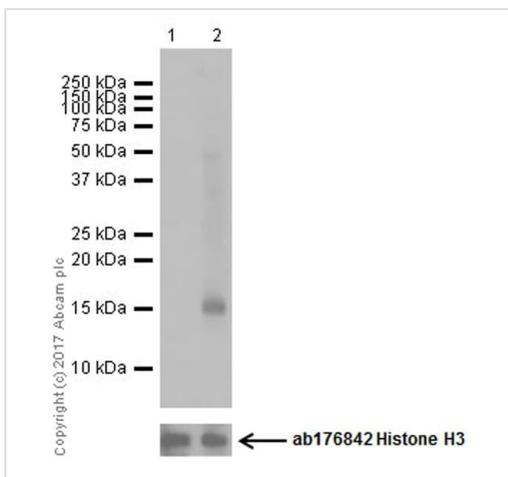
Observed band size: 14,17 kDa

Exposure time: 3 minutes

Blocking/dilution buffer and concentration: 5% NFDm/TBST

Expression of IL-17A can be induced by PMA and Ionomycin treatment (PMID 28382171).

The expression profile is consistent with the literature (PMID 9764847).



Western blot - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

All lanes : Anti-Histone H3 (citrulline R8) antibody [EPR20358-13] (**ab219406**) at 1/10000 dilution

Lane 1 : Whole cell lysate from HEK-293T (Human epithelial cell line from embryonic kidney) transfected with empty vector with GFP tag (vector control), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours

Lane 2 : Whole cell lysate from HEK-293T cells transfected with PAD4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours

Lysates/proteins at 10 µg per lane.

Secondary

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

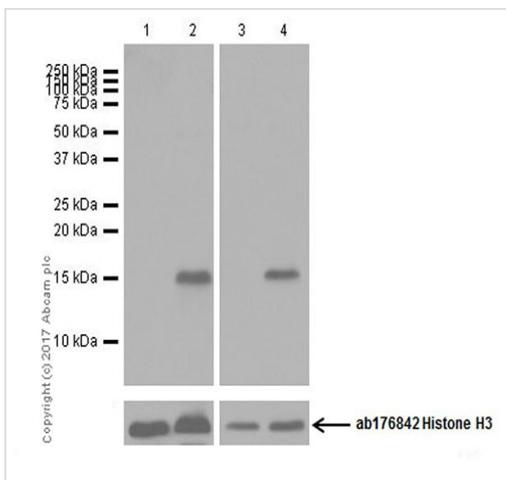
1/100000 dilution

Observed band size: 15 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% BSA/TBST.

Histone H3R8 is citrullinated by PADI4 and CaCl_2 is used as a cofactor according to the literature (PMID: 16567635). Ionomycin is used to improve the modification by PADI4 according to the literature (PMID: 26360112).



Western blot - Ionomycin Ca^{2+} Salt, Ca^{2+} ionophore (ab120116)

All lanes : Anti-Histone H3 (citrulline R8) antibody [EPR20358-13] (**ab219406**) at 1/5000 dilution

Lane 1 : Whole cell lysate from NIH/3T3 (Mouse embryonic fibroblast cell line) transfected with empty vector with GFP tag (vector control), then treated with 10mM CaCl_2 for 2 hours

Lane 2 : Whole cell lysate from NIH/3T3 transfected with PADI4 (WT) then treated with 10mM CaCl_2 for 2 hours

Lane 3 : Whole cell lysate from C6 (Rat gliial tumor cell line) transfected with empty vector with GFP tag (vector control) then treated with 10mM CaCl_2 and 10 μM Ionomycin (ab120116) for 2 hours

Lane 4 : C6 transfected with PADI4 (WT), then treated with 10mM CaCl_2 and 10 μM Ionomycin (ab120116) for 2 hours

Lysates/proteins at 10 μg per lane.

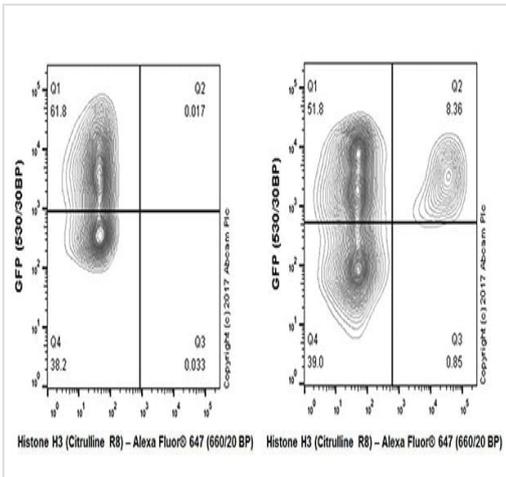
Secondary

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

Observed band size: 15 kDa

Exposure time: 1 second

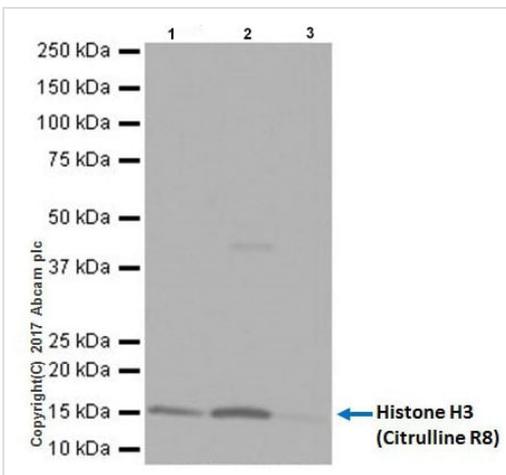
Blocking/Dilution buffer: 5% BSA/TBST.



Flow Cytometry (Intracellular) - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

Flow cytometric analysis of 4% paraformaldehyde-fixed HEK-293T (Human epithelial cell line from embryonic kidney) transfected with empty vector (left panel) or PADI4 (WT, right panel), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, labeling Histone H3 (citulline R8) with **ab219406** at 1/500 dilution, followed by Goat anti rabbit IgG (Alexa Fluor® 647) at 1/2000 dilution.

Positive signal is obtained from HEK-293T cells transfected with WT PADI4 treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours.



Immunoprecipitation - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

Histone H3 (citulline R8) was immunoprecipitated from 0.35 mg of HEK-293T (Human epithelial cell line from embryonic kidney) transfected with PADI4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate with **ab219406** at 1/30 dilution.

Western blot was performed from the immunoprecipitate using **ab219406** at 1/1000 dilution.

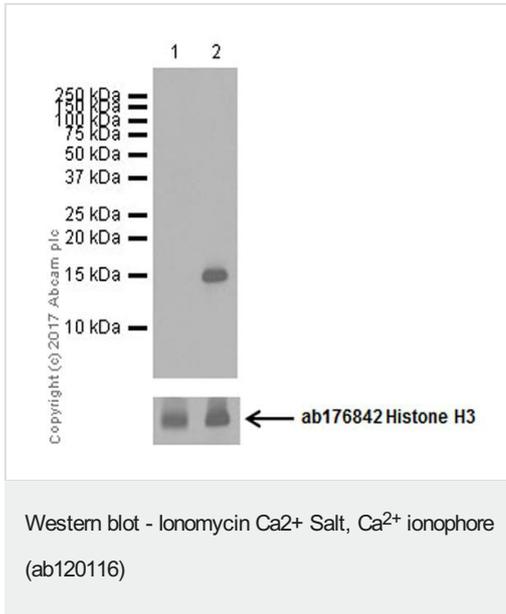
VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: HEK-293T transfected with PADI4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate 10 µg (Input).

Lane 2: **ab219406** IP in HEK-293T transfected with PADI4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab219406** in HEK-293T transfected with PADI4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate.

Blocking and dilution buffer: 5% NFD/MTBST.



All lanes : Anti-Histone H3 (citrulline R17) antibody [EPR20358-120] ([ab219407](#)) at 1/5000 dilution

Lane 1 : HEK-293T (Human epithelial cell line from embryonic kidney) transfected with empty vector with GFP tag (vector control), then treated with 10mM CaCl₂ and 10μM Ionomycin (ab120116) for 2 hours, whole cell lysate

Lane 2 : HEK-293T (Human epithelial cell line from embryonic kidney) transfected with PAD4 (WT), then treated with 10mM CaCl₂ and 10μM Ionomycin (ab120116) for 2 hours, whole cell lysate

Lysates/proteins at 10 μg per lane.

Secondary

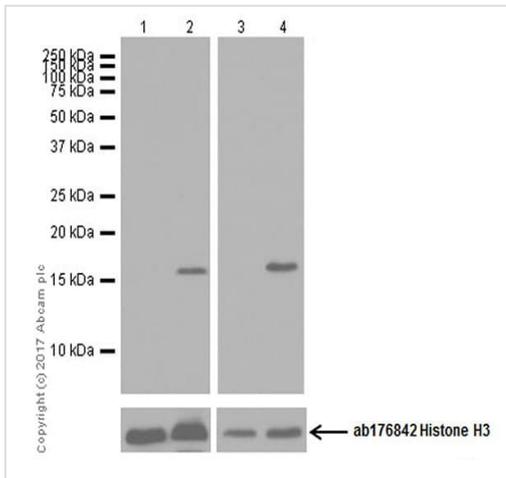
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Observed band size: 15 kDa

Exposure time: 3 seconds

Blocking/Dilution buffer: 5% BSA/TBST.

Histone H3R17 is citrullinated by PAD4 and CaCl₂ is used as a cofactor according to the literature (PMID: 16567635). Ionomycin is used to improve the modification by PAD4 according to the literature (PMID: 26360112).



Western blot - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

All lanes : Anti-Histone H3 (citrulline R17) antibody [EPR20358-120] ([ab219407](#)) at 1/5000 dilution

Lane 1 : NIH/3T3 (Mouse embryonic fibroblast cell line) transfected with empty vector with GFP tag (vector control), then treated with 10mM CaCl₂ for 2 hours, whole cell lysate

Lane 2 : NIH/3T3 (Mouse embryonic fibroblast cell line) transfected with PADI4 (WT) then treated with 10mM CaCl₂ for 2 hours, whole cell lysate

Lane 3 : C6 (Rat glial tumor cell line) transfected with empty vector with GFP tag (vector control) then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate

Lane 4 : C6 (Rat glial tumor cell line) transfected with PADI4 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate

Lysates/proteins at 10 µg per lane.

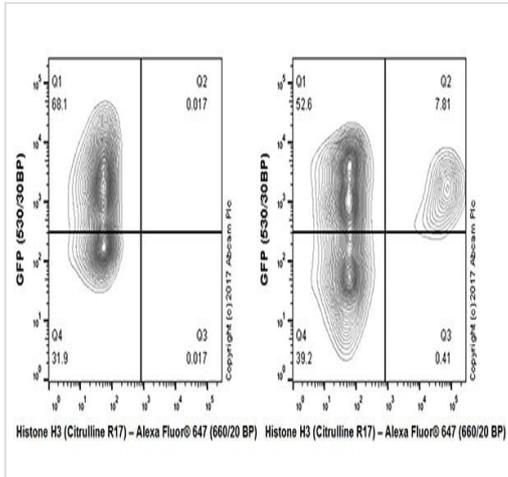
Secondary

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

Observed band size: 15 kDa

Exposure time: 1 second

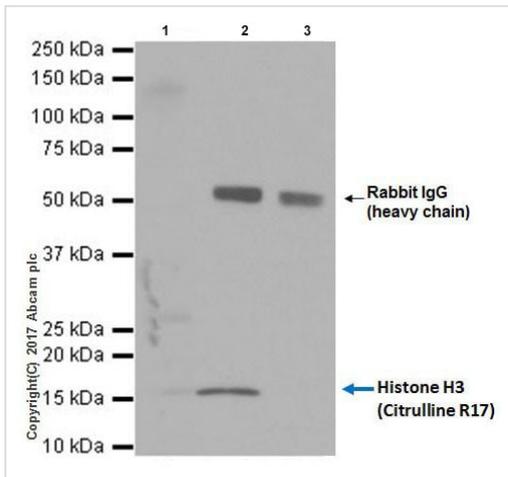
Blocking/Dilution buffer: 5% BSA/TBST.



Flow Cytometry (Intracellular) - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

Flow cytometric analysis of 4% paraformaldehyde-fixed HEK-293T (Human epithelial cell line from embryonic kidney) transfected with empty vector (left panel) or PAD14 (WT, right panel), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, labeling Histone H3 (citulline R17) with **ab219407** at 1/500 dilution, followed by Goat anti rabbit IgG (Alexa Fluor® 647) at 1/2000 dilution.

Positive signal is obtained from HEK-293T cells transfected with WT PAD14 treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours.



Immunoprecipitation - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

Histone H3 (citulline R17) was immunoprecipitated from 0.35 mg of HEK-293T (Human epithelial cell line from embryonic kidney) transfected with PAD14 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate with **ab219407** at 1/30 dilution.

Western blot was performed from the immunoprecipitate using **ab219407** at 1/1000 dilution.

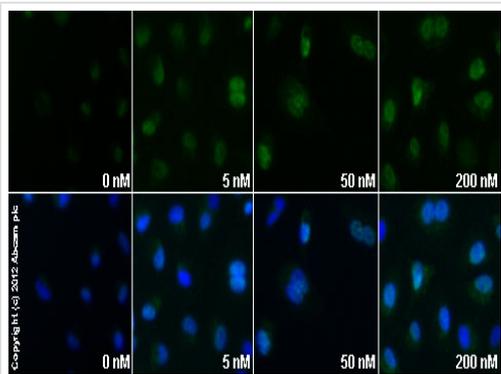
VeriBlot for IP secondary antibody (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: HEK-293T transfected with PAD14 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate 10 µg (Input).

Lane 2: **ab219407** IP in HEK-293T transfected with PAD14 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab219407** in HEK-293T transfected with PAD14 (WT), then treated with 10mM CaCl₂ and 10µM Ionomycin (ab120116) for 2 hours, whole cell lysate.

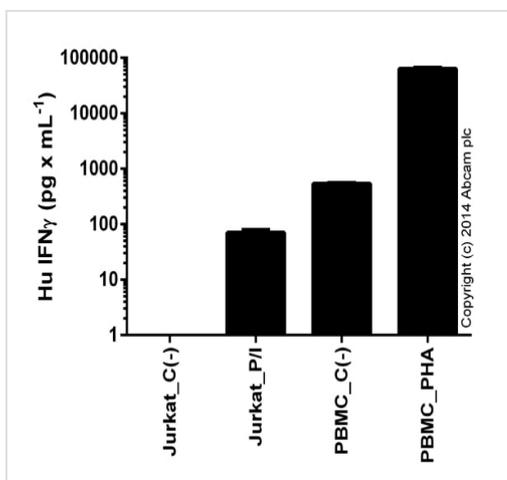
Blocking/Dilution buffer: 5% NFDN/TBST.



Functional Studies - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

ab58668 staining ATF3 in A549 cells treated with ionomycin Ca²⁺ salt (ab120116), by ICC/IF. Increase in ATF3 expression correlates with increased concentration of ionomycin Ca²⁺ salt, as described in literature.

The cells were incubated at 37°C for 2h in media containing different concentrations of ab120116 (ionomycin Ca²⁺ salt) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with **ab58668** (10 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-mouse polyclonal antibody (**ab96879**) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.



Sandwich ELISA - Ionomycin Ca²⁺ Salt, Ca²⁺ ionophore (ab120116)

Sandwich ELISA - IFN gamma Human ELISA Kit (**ab46025**)

Jurkat were stimulated for 48 hours with 50 ng x mL⁻¹ of PMA (**ab120297**) and 1 uM Ionomycin (ab120116) and PBMCs were stimulated for 48 hours with 2 % PHA-M (LifeTechnologies). Cell free supernatants were tested, showing results after background signal was subtracted (duplicates +/- SD).

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