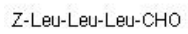
abcam

Product datasheet

MG-132, proteasome inhibitor ab141003

★★★★★ 1 Abreviews 40 References 11 图像

概述

产品名称	MG-132, proteasome抑制剂
描述	Potent, reversible proteasome抑制剂
生物学描述	Potent, reversible, proteasome inhibitor (K_i = 4 nM). Inhibits NF-κB activation by preventing IκB degradation (IC_{50} = 3 µM). Anti-cancer properties *in vitro* and *in vivo*. Cell-permeable. Also available as ethanol solution (**ab147047**).
纯度	> 98%
CAS编号	133407-82-6
化学结构	

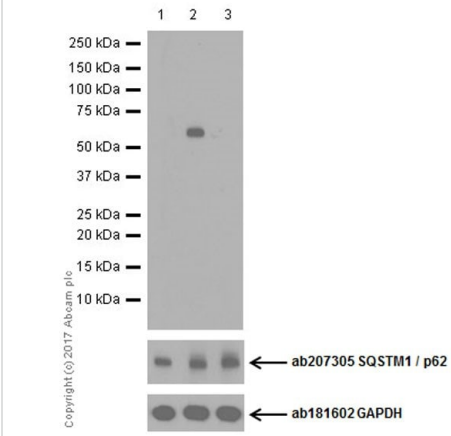
性能

分子量	475.62
分子式	$C_{26}H_{41}N_3O_5$
序列	LLL (Modifications: N-terminal benzyloxycarbonyl; C-terminal aldehyde)
PubChem识别号	462382
存放说明	Store at -20°C. It is important to note that this is air sensitive and impurities can occur as a result of air oxidation. Store under desiccating conditions.
溶解度概述	Soluble in DMSO to 100 mM but unstable for prolonged periods. Soluble 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 week. 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. Need more advice on solubility, usage and handling? Please visit our **frequently asked questions (FAQ) page** for more details.
SMILES	CC(C)CC(C=O)NC(=O)C(CC(C)C)NC(=O)C(CC(C)C)NC(=O)OCC1=CC=CC=C1
来源	Synthetic

图片

Chemical Structure - MG-132, proteasome inhibitor (ab141003)

2D chemical structure image of ab141003, MG-132, proteasome inhibitor



Western blot - MG-132, proteasome inhibitor (ab141003)

All lanes : Anti-SQSTM1 / p62 (phospho S349) antibody [EPR20451] (**ab211324**) 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 2µM MG-132 (ab141003) for 18 hours
Lane 3 : HeLa whole cell lysate treated with 2µM MG-132 (ab141003) for 18 hours, then treated with Alkaline Phosphatase for 1 hour

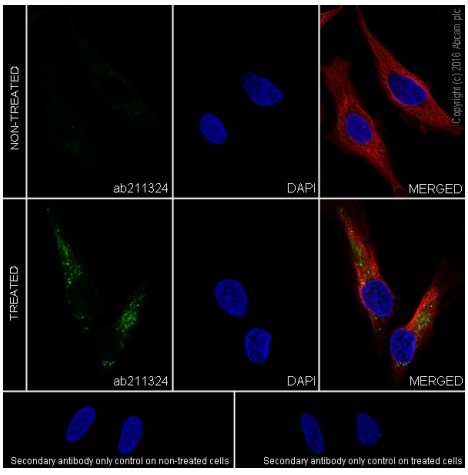
Lysates/proteins at 10 µg per lane.

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

Observed band size: 62 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunocytochemistry/ Immunofluorescence - MG-132, proteasome inhibitor (ab141003)

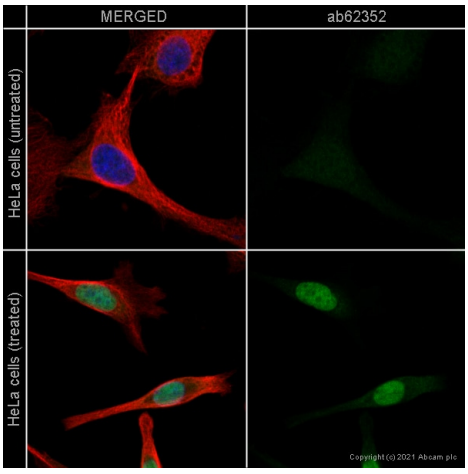
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells, treated with 2µM MG-132 (ab141003) for 18 hours or untreated, labeling SQSTM1 / p62 (phospho S349) with **ab211324** at 1/100 dilution, followed by Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) secondary antibody at 1/200 dilution (green).

Confocal image showing cytoplasmic staining on HeLa cell line. The expression increased after treatment with 2µM MG-132 (ab141003) for 18 hours.

The nuclear counterstain is DAPI (blue).

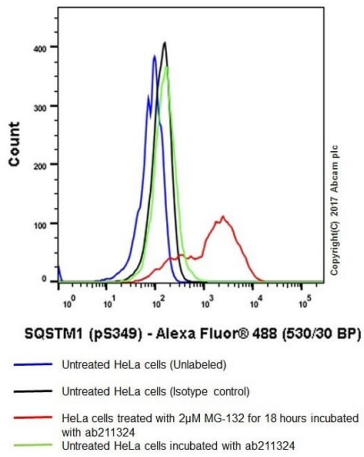
Tubulin is detected with **ab195889** (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

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.



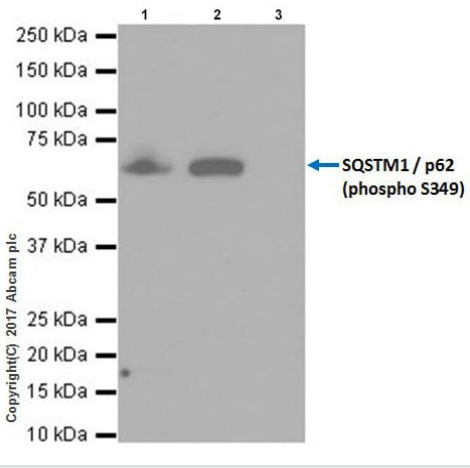
Immunocytochemistry/ Immunofluorescence - MG-132, proteasome inhibitor (ab141003)

ab62352 staining Nrf2 in untreated HeLa cells (top panel) and treated HeLa cells (bottom panel). Cells were treated with 2µM of MG-132 for 18 hours (ab141003). The cells were fixed with 4% paraformaldehyde (10 min) then permeabilized with 0.1% Triton X-100 for 5 minutes 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 with **ab62352** at 1µg/ml concentration and **ab7291** (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (**ab150081**) at 2µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (**ab150120**) at 2µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI. Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



Flow Cytometry (Intracellular) - MG-132, proteasome inhibitor (ab141003)

Flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells, treated with 2µM MG-132 (ab141003) for 18 hours (red) or untreated (green), labeling SQSTM1 / p62 (phospho S349) with **ab211324** at 1/500 dilution compared with a rabbit monoclonal IgG isotype control (**ab172730**; black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - MG-132, proteasome inhibitor (ab141003)

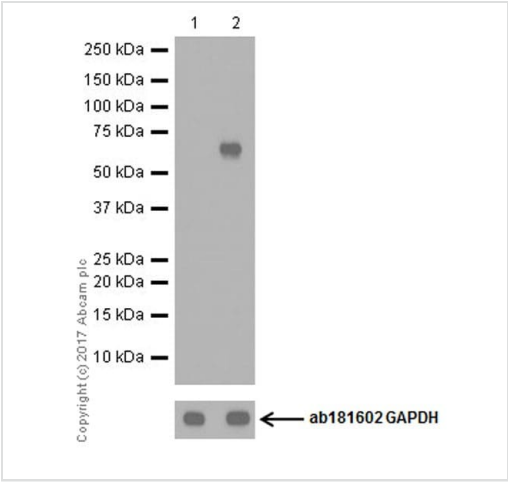
SQSTM1 / p62 (phospho S349) was immunoprecipitated from 0.35 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate treated with 2µM MG-132 (ab141003) for 18h with **ab211324** at 1/30 dilution.

Western blot was performed from the immunoprecipitate using **ab211324** at 1/1000 dilution.

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

Lane 1: HeLa treated with 2µM MG-132 (ab141003) for 18h whole cell lysate, 10 µg (Input).
Lane 2: **ab211324** IP in HeLa treated with 2µM MG-132 (ab141003) for 18h whole cell lysate.
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab211324** in HeLa treated with 2µM MG-132 (ab141003) for 18h whole cell lysate.

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - MG-132, proteasome inhibitor (ab141003)

All lanes : Anti-SQSTM1 / p62 (phospho S349) antibody [EPR20451] (**ab211324**) at 1/1000 dilution

Lane 1 : Untreated C6 (Rat glial tumor cell line) whole cell lysate
Lane 2 : C6 whole cell lysate treated with 2µM MG-132 (ab141003) for 18 hours

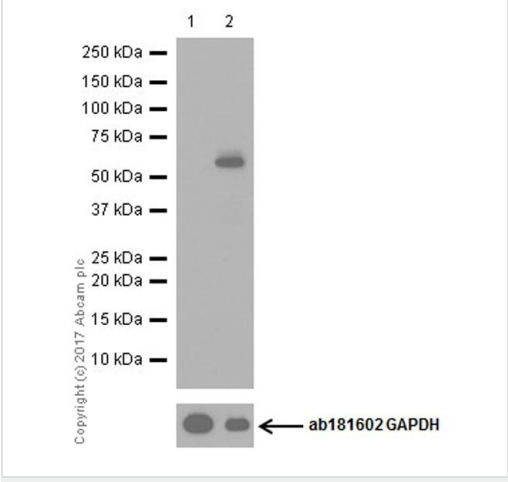
Lysates/proteins at 10 µg per lane.

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

Observed band size: 62 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - MG-132, proteasome inhibitor (ab141003)

All lanes : Anti-SQSTM1 / p62 (phospho S349) antibody [EPR20451] (**ab211324**) at 1/1000 dilution

Lane 1 : Untreated NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate
Lane 2 : NIH/3T3 whole cell lysate treated with 2µM MG-132 (ab141003) for 18 hours

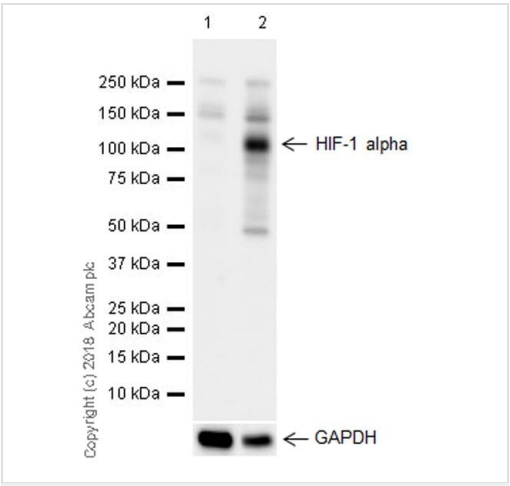
Lysates/proteins at 10 µg per lane.

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

Observed band size: 62 kDa

Exposure time: 4 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot - MG-132, proteasome inhibitor (ab141003)

All lanes : Anti-HIF-1 alpha antibody [EPR16897] (**ab179483**) at 0.163 µg/ml

Lane 1 : Untreated C6 (rat glial tumor glial cell), whole cell lysate
Lane 2 : C6 treated with 400 µM CoCl2 and 20 µM MG-132 (ab141003) for 4 hours

Lysates/proteins at 10 µg per lane.

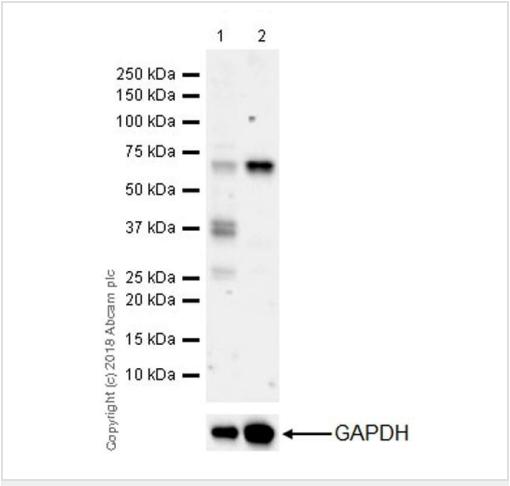
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Observed band size: 110 kDa

Exposure time: 26 seconds

Blocking and diluting buffer: 5% NFDM/TBST.

The expression of HIF-1 alpha is induced by CoCl2 and maintained by MG-132 (PMID: 15836611).



Western blot - MG-132, proteasome inhibitor (ab141003)

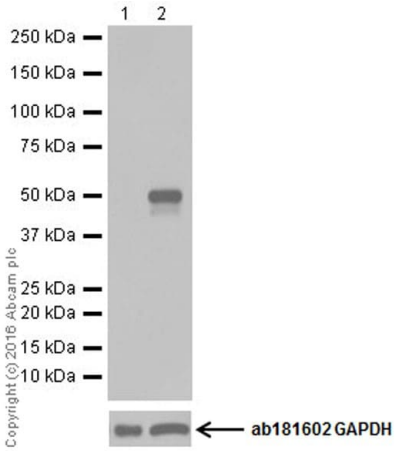
All lanes : Anti-YTHDF2 antibody [EPR20318] (**ab220163**) at 1/5000 dilution

Lane 1 : Untreated HT-1080 (human fibrosarcoma epithelial cell) whole cell lysate at 20 µg
Lane 2 : HT-1080 treated with 10µM MG-132 (ab141003) for 4 hours, whole cell lysate at 10 µg

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

Exposure time: 103 seconds

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



Western blot - MG-132, proteasome inhibitor (ab141003)

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 µM MG-132 (ab141003) and 3 µg/ml tunicamycin (**ab120296**) for 6 hours 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

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).

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