MG-132
26S proteasome inhibitor & autophagy inducer
Catalog code: tlrl-mg132
https://www.invivogen.com/mg-132
For research use only
Version 20C31-MM

PRODUCT INFORMATION
Contents
5 mg MG-132
Storage and stability:
- MG-132 is shipped at room temperature. Upon receipt, store at -20°C. Solid product is stable for 1 year when properly stored.
- Upon reuspension, prepare aliquots of MG-132 and store at -20°C. Resuspended MG-132 is stable for 1 month when properly stored.
Quality control:
- The biological activity has been confirmed using cellular assays.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

DESCRIPTION
MG-132 is a peptide aldehyde (Z-Leu-Leu-Leu-al) that selectively blocks the proteolytic activity of the 26S proteasome. This potent inhibitor is used as a tool for disrupting the proteasome-regulated degradation of intracellular proteins, such as IκB. Inhibition of IκB proteasomal degradation by MG-132 leads to the suppression of NF-κB activation. Furthermore, by blocking proteasomal degradation MG-132 can induce autophagy1.


CHEMICAL PROPERTIES
CAS number: 133407-82-6
Formula: C_{26}H_{41}N_{3}O_{5}
Molecular weight: 475.62
Solubility: 20 mg/ml in DMSO
Structure:

METHODS
Preparation of stock solution at 20 mg/ml (42 mM)
1. Add 250 µl DMSO to 5 mg MG-132.
2. Vortex until complete solubilization.
3. Prepare aliquots of MG-132 and store at -20°C.
4. Once MG-132 is solubilized, dilute 1 in 100 using sterile culture medium to obtain a solution at 200 µg/ml (420 µM). Do not store dilutions for more than one day.
Note: Dilutions in water may cause the product to precipitate.

Working concentration: 0.2 - 20 µM (95 ng/ml - 9.5 µg/ml)

PROTOCOLS
For reference only; as described in the indicated publications.
Cell Culture Assay1
Cells: Human SHG-44 glioma cells
Working concentration: 6 µM
Incubation time: 48 h
Method: Cell viability assay, transmission electron microscopy

Cell Culture Assay1
Cells: NIH 3T3 or J558 myeloma cells
Working concentration: 0.2 - 20 µM
Incubation time: 1-4 h
Method: Western Blot and RT-PCR analysis

Cell Culture Assay1
Cells: Primary human acute myelogenous leukemia (AML) cells
Working concentration: 1 µM
Incubation time: 6 h
Method: Electrophoretic mobility shift assays (EMSAs), Western Blot and RT-PCR analysis

RELATED PRODUCTS
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<td>Metformin</td>
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