Product Datasheet

Caspase-3 Antibody (31A1067) - (Pro and Active) - BSA Free

NB100-56708

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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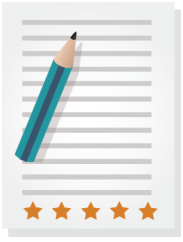
Updated 4/15/2024 v.20.1



NB100-56708

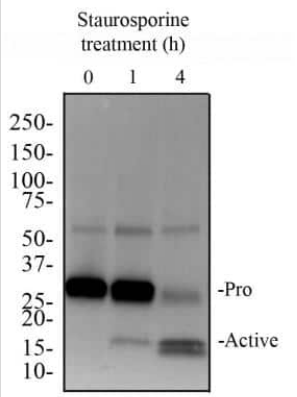
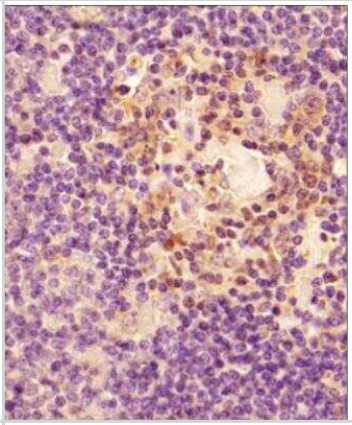
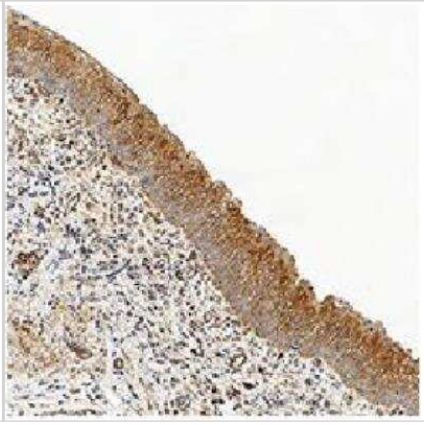
Caspase-3 Antibody (31A1067) - (Pro and Active) - BSA Free

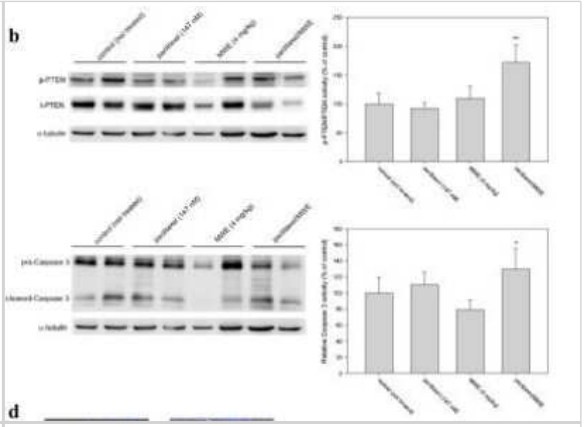
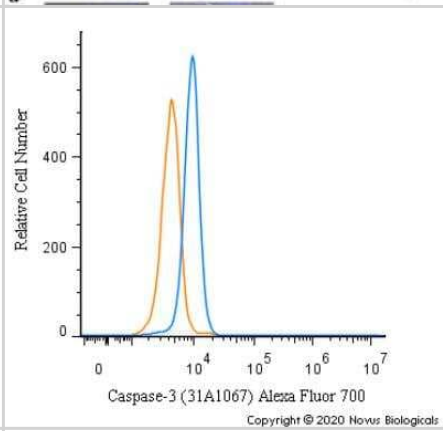
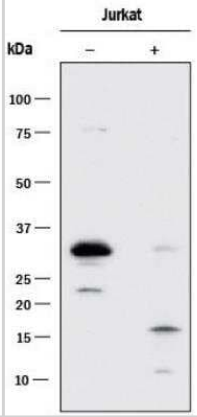
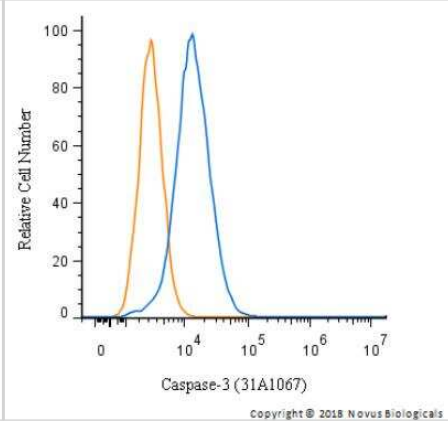
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	31A1067
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	31.7 kDa

Product Description	
Host	Mouse
Gene Symbol	CASP3
Species	Human, Mouse, Rat, Porcine, Chicken, Chinese Hamster, Mammal
Reactivity Notes	Chicken reactivity reported in scientific literature (PMID: 30298003).
Specificity/Sensitivity	The antibody detects both pro Caspase-3 (~32 kDa) and the large subunit of the active/cleaved form (~14-21 kDa) of Caspase-3.
Immunogen	This Caspase-3 Antibody (31A1067) - (Pro and Active) was developed against full-length recombinant human caspase-3 protein.

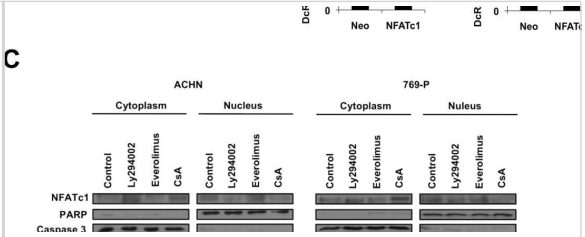
Product Application Details	
Applications	Western Blot, Simple Western, Electron Microscopy, Flow Cytometry, Hematoxylin and Eosin Stain, Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, CyTOF-ready, Immunohistochemistry Free-Floating, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 1 - 5 ug/ml, Simple Western 1:50, Flow Cytometry reported in scientific literature (PMID 27429862), Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 23840553), Immunohistochemistry-Paraffin 1:10 - 1:500. Use reported in scientific literature (PMID 28500555), Immunohistochemistry-Frozen 1:10 - 1:500. Use reported by customer review, Immunoblotting reported in scientific literature (PMID 28500555), Hematoxylin and Eosin Stain reported in scientific literature (PMID 28186963), Electron Microscopy reported in scientific literature (PMID 27450722), Immunohistochemistry Free-Floating reported in scientific literature (PMID 31771656), CyTOF-ready, Knockout Validated, Knockdown Validated reported in scientific literature (PMID 32867814)
Application Notes	The large subunit of the cleaved form may appear as one or two or even as a stack of bands depending on the presence or absence of the Caspase-3 pro-domain. It is highly recommended that a maximum sensitivity ECL substrate (Femto sensitive) be used for efficient detection of this antibody in Western blot applications. In Simple Western only 10 - 15 ul of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue. This antibody is CyTOF ready.

Images

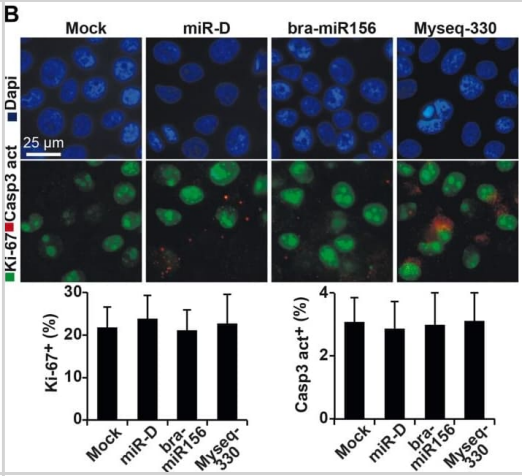
Image of Caspase-3 Antibody (31A1067) - (Pro and Active). Whole cell protein from Jurkat cells treated with and without 2 uM staurosporine as indicated was separated on a 4-15% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 5 ug/ml anti-Caspase 3 in 1% milk, and detected with an anti-mouse HRP secondary antibody using a Femto sensitivity chemiluminescence reagent. Note the detection of both pro-caspase 3 at 35 kDa and the cleaved active caspase 3 at 15-17 kDa.	
Tissue section of human spleen using 1:200 dilution of Caspase-3 antibody (clone 31A1067). The staining was developed with HRP labeled anti-mouse IgG secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin. This Caspase 3 antibody generated primarily a specific cytoplasmic staining in a subset of spleenocytes with some nuclear signal in a few cells.	
Simple Western lane view shows a specific band for Caspase-3 Antibody (31A1067) - (Pro and Active) in 0.1 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230kDa separation system.	
Caspase-3 was detected in immersion fixed paraffin-embedded sections of human bladder tissue using 1:50 dilution of mouse aCaspase-3 Antibody (31A1067) - (Pro and Active) (NB100-56708), for 1 hour at room temperature followed by anti-mouse IgG VisUCyte HRP polymer (VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue).	

Paclitaxel in combination with MWE retarded tumor growth in a human bladder carcinoma TSGH 8301 xenograft model. The levels of total (t-PTEN) and phospho-PTEN (p-PTEN) and Caspase 3 in the tumor specimens were determined by Western blotting and then quantified using beta-actin as the protein loading control; the results are expressed as a percentage of the control. Image collected and cropped by CiteAb from the following publication (http://www.nature.com/articles/srep20417), licensed under a CC-BY license.	
An intracellular stain was performed on NIH3T3 cells with Caspase-3 Antibody (31A1067) - (Pro and Active) Antibody NB100-56708AF700 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 700.	
Lysates of Jurkat human acute T cell leukemia cell line untreated (-) or treated (+) with VP-16. PVDF membrane was probed with 0.1 ug/mL of mouse monoclonal Caspase-3 Antibody (31A1067) - (Pro and Active) (NB100-56708, Novus Biologicals) followed by 1:2000 dilution donkey anti-mouse IgG.	
An intracellular stain was performed on HeLa cells with Caspase-3 Antibody (31A1067) - (Pro and Active) NB100-56708 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature, followed by mouse F(ab)2 IgG (H+L) APC-conjugated secondary antibody (F0101B, R&D Systems).	

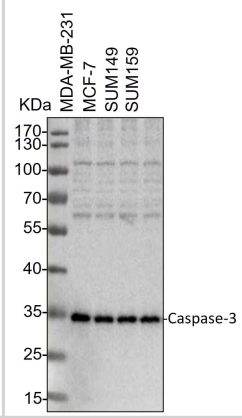
NFATc1 regulates DcR3 expression at a transcriptional level. (C) Immunoblot analysis of cytoplasmic and nuclear fractions of ACHN and 769-P cells after treatment with LY294002 (50 uM), Everolimus (1 uM), or Cyclosporine A (25 uM). Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/24107265), licensed under a CC-BY licence.



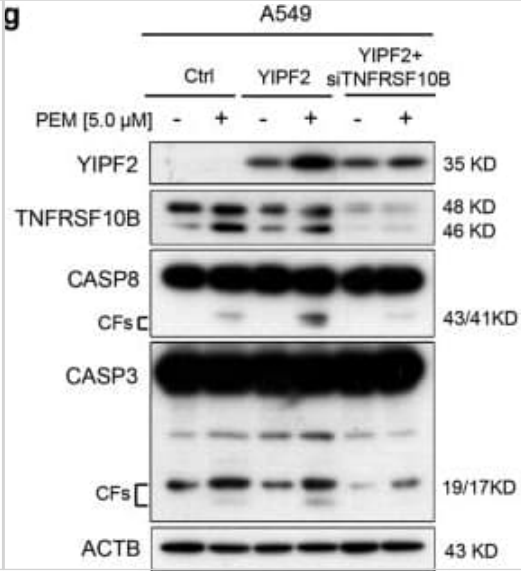
Lipofection of top broccoletti-miR candidates does not influence basal and induced apoptosis. (B) Lipofected BxPc-3 and Bx-Gem cells were stained with an antibody specific for the proliferation marker Ki-67 (green) or the apoptosis marker cleaved fragment of caspase-3 (red), which indicates apoptosis. Representative images at x100 magnification are shown. The percentage of Ki-67- or caspase-3-positive cells was counted in 18 visual fields, and the means +/- SD are shown in the diagram below. (C) BxPc-3 and Bx-Gem were lipofected as described above, and at 24 h later, the cells were treated with gemcitabine (10 nM) or were left untreated. Ninety-six hours after gemcitabine treatment, viability was determined by MTT assay. The data are presented as the means +/- SD (**P < 0.01). Image collected and cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32292571), licensed under a CC-BY licence.



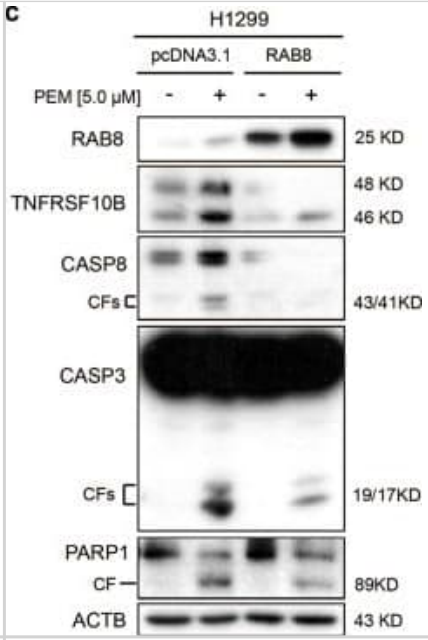
Western Blot: Mouse Monoclonal Caspase-3 Antibody (31A1067) - (Pro and Active) [IMGENEX: IMG-144A] [NB100-56708] - Whole cell lysates from MDA-MB-231, MCF-7, SUM149 and SUM159 cells were loaded with 50 ug/lane. 10% SDS-PAGE. Caspase-3 Antibody (NB100-56708) was used for primary antibody: 1:2000, 4□, overnight. Image from a verified customer review.



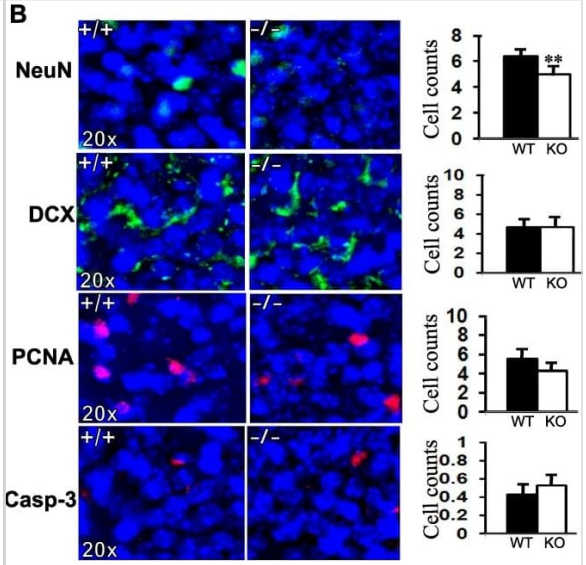
APE1 acetylation enhances its stability on chromatin and its interaction with downstream BER proteins. (A) Colocalization of ligase III and AcAPE1 in A549 cells. Cells were immunostained with anti-ligase III and anti-AcAPE1 Abs. (B) WT or K5R mutant APE1-overexpressing HEK293T cells were treated with TSA-nicotinamide (NAM) for 6 h or not treated, and the nuclear extract was immunoprecipitated using anti-FLAG Ab and immunoblotted with anti-XRCC1 and anti-FLAG Abs. (C) A549 cells were fixed with paraformaldehyde before (top) or after treatment with Triton X-100 (0.5%) (middle) or Triton X-100 plus salt (100 mM KCl) (bottom) and immunostained with anti-APE1 or anti-AcAPE1 Abs and counterstained with DAPI. (D) Acetylation of APE1 induces a conformational change in APE1. The distinct intrinsic fluorescence emission spectra of APE1 and AcAPE1 at 280 nm are shown. A.U., absorbance units. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/27994014), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



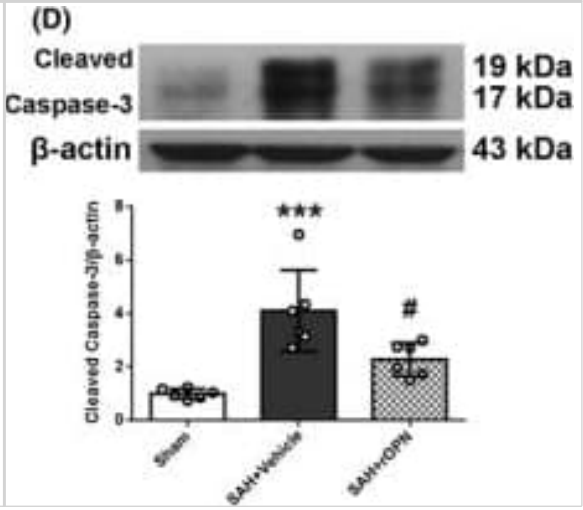
Reduced expression levels of IFI16 protein in human normal diploid fibroblasts after treatment with histone deacetylase inhibitor are associated with increased expression of hTERT and increased telomerase activity.(A) Total RNA isolated from untreated (control, lane 1) or CGK1026 (10 μM for 24 h, lane 2) treated young WI-38 fibroblasts was subjected cDNA synthesis followed by semi-quantitative PCR using a pair of primer specific to the IFI16, hTERT, or actin. As a positive control, we used RNA from human HT1080, a human fibrosarcoma cell line. (B) Total RNA isolated from untreated (control) or CGK1026 (10 μM for 24 h; treated) treated young WI-38 fibroblasts was subjected cDNA synthesis, followed by quantitative real-time PCR using the TaqMan assay for the hTERT gene. Results are mean values of triplicate experiments and error bars represent standard deviation (**p<0.005). (C and D) Total protein extracts prepared from untreated (lane 1) or CGK1026 (10 μM for 24 h; treated) treated young WI-38 fibroblasts were subjected to immunoblotting using antibodies specific to the indicated proteins. Image collected and cropped by CiteAb from the following open publication (https://dx.plos.org/10.1371/journal.pone.0008569), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



HIF-1α overexpression rescues oxygen-induced radioresistance in RAH-treated cells, but not GCH-treated cells.Results are shown for the anchorage-independent colony forming assays for U87 cells transfected with either an empty vector or HIF-1α expression vector and then exposed to GCH or RAH protocols without (–) or with (+) reoxygenation. Continuously normoxic cells (NOx) were irradiated as a positive control. To allow for ease of comparisons among conditions, raw values are presented as a percentage of that cell type's negative (non-irradiated) control and the means and SEMs are plotted. Each result represents at least three independent samples, plated in triplicate. Holm-Sidak comparisons for multiple groups were used for statistical comparisons of raw values (*p<0.05, **p<0.01). Western blotting analysis of nuclear HIF-1α at the time of irradiation is shown for each cell type below clonogenic results. Corresponding Western blots of lamin A/C are shown as a loading control and blots for hemagglutinin (HA) are shown below HIF-1α overexpression vector results to demonstrate transfection efficacy. All lanes shown that are non-adjacent to the negative control (NOx) are denoted with a separating black line. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/25350400), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Differential roles of caspase-1 and caspase-11 in response to infection with Aspergillus fumigatus.(A) Immunoblot analysis of pro-caspase-1 (Pro-Casp-1) and the caspase-1 subunit p20 (Casp-1 p20) and GAPDH (loading control) in unprimed WT or mutant bone marrow-derived dendritic cells left untreated (medium alone [Med]) or assessed 20 h after infection with A. fumigatus (MOI, 10). (B) Release of IL-1β and IL-18 after treatment as in (A). (C) Survival of 8-week-old WT and mutant mice infected with 5 × 105 A. fumigatus conidia after immunosuppression with cyclophosphamide and cortisone acetate. *P < 0.05, ****P < 0.0001 (log-rank test). Data are representative of two (C) or three independent experiments (A and B; mean and s.e.m. are representative of values from three independent experiments in B). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/28345580), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Han HJ, Sivaraman A, Kim M et al. HIF-1? inhibition by MO-2097, a novel chiral-free benzofuran targeting hnRNPA2B1 Journal of advanced research 2023-11-15 [PMID: 37977260] (WB, Human)

Büyükerkmen E, Atay E, Firat F et al. Effect of sugammadex administration on neural tube development in 48-h chick embryos Microscopy research and technique 2023-11-07 [PMID: 37933747] (ICC/IF, Chicken)

Tabanifar B, Moorthy A, Tsai HH et al. JNK mediates cell death by promoting the ubiquitination of the apurinic/apyrimidinic endonuclease APE1 Cell reports 2023-09-12 [PMID: 37703179] (WB, Human)

Sivasoorian SS, Urade R, Chiu CC, Wang LF. Neuropeptide-Functionalized Gold Nanorod Enhanced Cellular Uptake and Improved In Vitro Photothermal Killing in LRP1-Positive Glioma Cells Pharmaceutics 2022-09-13 [PMID: 36145687]

Omar AE, Al-Khalaifah HS, Osman A et al. Modulating the Growth, Antioxidant Activity, and Immunoexpression of Proinflammatory Cytokines and Apoptotic Proteins in Broiler Chickens by Adding Dietary Spirulina platensis Phycocyanin Antioxidants (Basel) 2022-05-19 [PMID: 35624855] (B/N)

Patra T, Meyer K, Ray RB et al. Akt inhibitor augments anti-proliferative efficacy of a dual mTORC1/2 inhibitor by FOXO3a activation in p53 mutated hepatocarcinoma cells Cell Death & Disease 2021-11-10 [PMID: 34759291] (B/N)

Gains CC, Giannapoulos A, Zamboulis DE et al. Development and application of a novel in vivo overload model of the Achilles tendon in rat Journal of biomechanics 2023-04-01 [PMID: 36958089] (IHC, Rat)

Fernandes MGF, Mohammadnia A, Pernin F et al. Mechanisms of metabolic stress induced cell death of human oligodendrocytes: relevance for progressive multiple sclerosis Acta neuropathologica communications 2023-07-05 [PMID: 37408029] (WB, Human)

Urade R, Chang WT, Ko CC et al. A fluorene derivative inhibits human hepatocellular carcinoma cells by ROS-mediated apoptosis, anoikis and autophagy Life sciences 2023-06-07 [PMID: 37295712]

Wächter S, Roth S, Gercke N et al. Anti-Proliferative Effect of Radiotherapy and Implication of Immunotherapy in Anaplastic Thyroid Cancer Cells Life (Basel, Switzerland) 2023-06-15 [PMID: 37374179] (WB, Human)

Dunphy M Lipoprotein (a), Oxidized Phospholipids, and Vascular Smooth Muscle Cell Phenotype and Viability Thesis 2023-01-01

Lee JC, Kim GC, Kim SW et al. Letter-to-editor, "Feedback amplification of senolysis using caspase-cleavable peptide-doxorubicin conjugate and 2DG" [Journal of Controlled Release, Volume 346, pp. 158-168, (2022), doi: 10.1016/j.jconrel.2022.04.012] Journal of controlled release : official journal of the Controlled Release Society 2023-04-18 [PMID: 37003491] (WB, Human)

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