

ATPase Inhibitors

Item No.	Product Name	Summary
11038	Bafilomycin A ₁	A selective, reversible inhibitor of V-ATPases (IC ₅₀ s = 4-400 nM); inhibits autophagy by preventing vacuolar acidification necessary for autophagosome maturation
15318	DBeQ	A selective, reversible inhibitor of the ATPase p97 (K _i = 3.2 μM; IC ₅₀ = 1.5 μM); impairs the autophagy pathway, promoting the activation of caspase-3 and -7

View additional ATPase inhibitors online at www.caymanchem.com

Vps34 Inhibitors

Item No.	Product Name	Summary
17002	PIK-III	Selectively inhibits Vps34 (IC ₅₀ = 18 nM) blocking autophagy and <i>de novo</i> lipidation of LC3
16979	SAR405	Selectively inhibits Vps34 (IC ₅₀ = 1.2 nM), blocking autophagosome formation
17769	Spatin-1	Promotes the degradation of the Vps34 PI3K complex by inhibiting USP10 and USP13 (IC ₅₀ s = 0.58 and 0.69 μM, respectively)
17392	Vps34-IN1	A potent inhibitor of Vps34 (IC ₅₀ = 25 nM <i>in vitro</i>)

MDM2-p53 Modulators

Item No.	Product Name	Summary
15573	CAY10681	Binds MDM2 (K _i = 250 nM), reducing MDM2-mediated turnover of p53
14858	MIRA-1	A mutant p53 reactivator that induces apoptosis
19919	NSC 59984	A reactivator of wild-type p53; induces p53 mutant protein degradation <i>via</i> MDM2-mediated ubiquitination
18585	(-)-Nutlin-3	Inhibits MDM2-p53 binding (IC ₅₀ = 90 nM), inducing the expression of p53-regulated genes
13326	Pifithrin-α	An inactivator of p53 that blocks p53-dependent transcriptional activation, autophagy, and apoptosis
21532	RG7388	A selective MDM2 inhibitor that blocks the binding of MDM2 to p53 (IC ₅₀ = 30 nM), activating the p53 pathway
10006426	RITA	Binds to p53 (K _d = 1.5 nM) and prevents interaction with HDM-2 resulting in p53 activation

View over 20 MDM2-p53 inhibitors online at www.caymanchem.com

Bcl-2 Family Inhibitors

Item No.	Product Name	Summary
21113	A-1210477	A selective Mcl-1 inhibitor (K _i = 0.43 nM; IC ₅₀ = 26.2 nM)
16233	ABT-199	A selective Bcl-2 inhibitor (K _i < 0.010 nM)
11314	Chelerythrine (chloride)	Inhibits Bcl-xL function (IC ₅₀ = 1.5 μM) by displacing Bax binding, inducing apoptosis
21006	Ubiquitin Isopeptidase Inhibitor I	Induces caspase activation and apoptosis (IC ₅₀ = ~1.7 μM) through a Bcl-2-dependent mitochondrial pathway
21478	WEHI-539	A selective inhibitor of Bcl-xL (IC ₅₀ = 1.1 nM)

View additional Bcl-2 inhibitors online at www.caymanchem.com

Bax Modulators

Item No.	Product Name	Summary
14128	Fludarabine	Triggers apoptosis through increasing Bax and decreasing Bid, XIAP, and survivin expression
15559	Mdivi 1	Prevents apoptosis by inhibiting mitochondrial outer membrane permeabilization <i>in vivo</i> and blocking Bid-activated Bax/Bak-dependent cytochrome c release from mitochondria <i>in vitro</i>
19230	Nimbolide	Upregulates the pro-apoptotic proteins Bax, caspase-3, and PARP
15039	Thymoquinone	Induces apoptosis by down-regulating the expression of Bcl-2 while up-regulating Bax expression

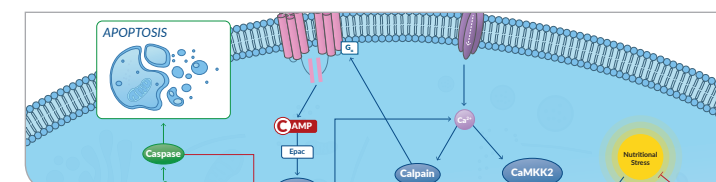
View additional Bax modulators online at www.caymanchem.com



To view a complete list of our autophagy and apoptosis research tools, visit us online at www.caymanchem.com

Autophagy and Apoptosis

Autophagy and apoptosis regulate cell survival and death in response to particular stress signals. Cell fate decisions are conferred through the complex crosstalk of a core regulatory signaling network involving cytoplasmic calcium, AMP-activated protein kinase, p53, Bcl-2, and caspases. Cayman offers many different chemical modulators of this pathway to analyze the dynamics of autophagy and apoptosis in cells.



Autophagy-Apoptosis Crosstalk wall chart **INSIDE!**

Autophagy Detection

Item No.	Product Name
600140	Autophagy/Cytotoxicity Dual Staining Kit
14338	Acridine Orange

Apoptosis Detection

Item No.	Product Name
601280	Multi-Parameter Apoptosis Assay Kit
21426	Tetramethylrhodamine ethyl ester (perchlorate)

View apoptosis assay kit recommendations at www.caymanchem.com/apoptosis

AMPK Activators

Item No.	Product Name	Summary
11900	A-769662	A direct activator of AMPK
10010241	AICAR	A selective activator of AMPK
19155	GSK621	An AMPK activator that triggers autophagy via the eIF2α/ATF4 signaling pathway
21220	Oleuropein	Induces autophagy by activating AMPK

View additional AMPK activators online at www.caymanchem.com

mTOR Pathway Inhibitors

Item No.	Product Name	Summary
11967	Dorsomorphin	A reversible AMPK inhibitor (K _i = 109 nM) that downregulates the Akt/mTOR pathway to induce autophagy in U251 human glioma cells
13346	Rapamycin	Inhibits the mTOR pathway by interacting with FKBP12 to form a complex that directly binds to mTORC1
10997	Torin 1	A selective mTORC1 and mTORC2 inhibitor (IC ₅₀ s = 2 and 10 nM, respectively)
14185	Torin 2	A selective mTOR inhibitor (EC ₅₀ = 0.3 nM) with more than 800-fold selectivity for mTOR over PI3K (EC ₅₀ = 200 nM) and improved bioavailability compared to Torin 1

View additional mTOR pathway inhibitors online at www.caymanchem.com

ATG Modulators

Item No.	Product Name	Summary
17768	SMER28	A small-molecule enhancer of autophagy that increases autophagosome synthesis and enhances clearance of aggregate-prone substrates
19828	CPTH6 (hydrobromide)	Alters ATG7-mediated elongation of autophagosomal membranes

ULK Inhibitors

Item No.	Product Name	Summary
18477	SBI-0206965	An inhibitor of ULK1 and ULK2 (IC ₅₀ s = 108 and 711 nM, respectively); suppresses autophagy induced by mTOR inhibition
19905	MRT68921	An inhibitor of ULK1 and ULK2 (IC ₅₀ s = 2.9 and 1.1 nM, respectively) that blocks autophagy

View additional ULK inhibitors online at www.caymanchem.com

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AUTOPHAGY-APOPTOSIS CROSSTALK

