

GMP Small Molecules

Name	Description
DAPT	γ -secretase Inhibitor; NOTCH Pathway Inhibitor
SB431542	TGF- β 1, ALK4 and ALK7 Inhibitor
Y-27632	Selective ROCK Inhibitor
CHIR 99021	GSK-3 Inhibitor, WNT Pathway Activator
XAV939	Tankyrase Inhibitor, WNT Signaling Inhibitor

Stem Cell Compounds Available from biotechne

Catalog No.	Product Name	Primary Action
Stem Cell Reprogramming and Differentiation		
4055	L-Ascorbic acid	Enhances the generation of iPSCs; increases reprogramming efficiency
3842	5-Azacytidine	DNA methyltransferase inhibitor; improves reprogramming efficiency
1544	(\pm)-Bay K 8644	Ca ²⁺ -channel activator (L-type); enhances iPSC conversion
3364	BIX 01294	GLP/G9a HMTase inhibitor; potentiates induction of iPSCs
4423	CHIR 99021 GMP	Highly selective GSK-3 inhibitor; enables reprogramming of mouse embryonic fibroblasts into iPSCs
4489	DBZ	Notch pathway inhibitor; stimulates formation of iPSCs from keratinocytes
4703	3-Deazaneplanocin A	Histone methyltransferase inhibitor; enhances Oct4 expression in chemically-induced pluripotent stem cells
1398	Kenpaullone	CDK inhibitor; generates iPSCs from somatic cells
4887	OAC-1	Oct4 activator; enhances iPSC reprogramming efficiency
4192	PD 0325901	Potent inhibitor of MEK1/2; enhances generation of iPSCs
2653	Pifithrin- μ	Inhibitor of p53-mitochondrial binding; enhances reprogramming efficiency
3742	RepSox	Selective TGF- β RI inhibitor; enhances reprogramming efficiency
3295	RG 108	Non-nucleoside DNA methyltransferase inhibitor; enhances efficiency of iPSC generation
3845	Thiazovivin	Improves the efficiency of fibroblast reprogramming and induction of iPSCs
3852	Tranylcypromine	Irreversible inhibitor of LSD1; enables reprogramming of mouse embryonic fibroblasts into iPSCs
1406	Trichostatin A	Potent HDAC inhibitor; induces accelerated dedifferentiation of primordial germ cells
0761	TTNPB	Retinoic acid analog; enhances efficiency of reprogramming in iPSCs
2815	Valproic acid, sodium salt	HDAC inhibitor; enables induction of pluripotent stem cells from somatic cells
Stem Cell Differentiation		
2840	AICAR	AMPK activator; promotes osteogenic differentiation of bone marrow-derived MSCs
3842	5-Azacytidine	DNA methyltransferase inhibitor; induces differentiation of MSCs into cardiomyocytes
3851	Cardiogenol C	Induces cardiomyocyte differentiation in ESCs
4475	Cardionogen 1	Inhibitor of Wnt/ β -catenin signaling; induces ES cell cardiac differentiation
5233	CCG 1423	Induces intermediate mesoderm differentiation from ESCs; Rho/SRF pathway inhibitor
5329	CKI 7	CK1 inhibitor; induces retinal cell differentiation from human ESCs and iPSCs
1623	Cyclopamine	Smo inhibitor; induces differentiation of hESCs into hormone expressing endocrine cells
2634	DAPT GMP	γ -secretase inhibitor; induces neuronal differentiation
1126	Dexamethasone	Anti-inflammatory glucocorticoid; induces differentiation of human MSCs
4126	DMH-1	Selective ALK2 inhibitor; promotes iPSC neurogenesis in combination with SB 431542 (Cat. No. 1614)
3176	DMSO, sterile filtered	Improves responsiveness of hESCs and hiPSCs to differentiation signals
3093	Dorsomorphin	ALK2, ALK3 and ALK6 inhibitor; promotes cardiomyocyte differentiation in mouse ESCs
1041	1-EBIO	K _{Ca} activator; promotes ESC differentiation into cardiomyocytes
4011	EC 23	Photostable synthetic retinoid; induces differentiation of stem cells
1261	EHNA	Adenosine deaminase inhibitor; suppresses spontaneous differentiation of human ESCs
5254	FH 1	Enhances iPSC-derived hepatocyte differentiation and maturation
0927	Fluoxetine	5-HT reuptake inhibitor; induces differentiation of neuronal precursors

Catalog No.	Product Name	Primary Action
1099	Forskolin	Adenylyl cyclase activator; induces neuronal differentiation
4918	GSA 10	Smo receptor agonist; induces differentiation of mesenchymal progenitor cells into osteoblasts
2845	IBMX	PDE inhibitor; facilitates differentiation of neural progenitor cells
4015	IDE 1	Induces definitive endoderm formation in mouse and human ESCs
4016	IDE 2	Induces definitive endoderm formation in mouse and human ESCs
5513	Isotretinoin	Inducer of neuronal differentiation; endogenous agonist for retinoic acid receptors
4439	ISX 9	Induces neuronal differentiation of SVZ progenitors; also induces cardiomyogenic differentiation
5068	ITD 1	Selective inhibitor of TGF- β signaling; induces cardiomyocyte differentiation in ESCs
5214	IWP 4	Potent inhibitor of Wnt/ β -catenin signaling; induces cardiomyocyte differentiation of human ESCs and iPSCs
4513	Kartogenin	Potently induces chondrogenesis in MSCs
4888	KHS 101	Selective inducer of neuronal differentiation in hippocampal neural progenitors
4731	KY 02111	Inhibits canonical Wnt signaling; promotes differentiation of human ESCs and iPSCs into cardiomyocytes
2864	Metformin	Activator of LKB1/AMPK; enhances neurogenesis
3656	Neurodazine	Induces neurogenesis in mature skeletal muscle cells
5186	Neuropathiazol	Selective inducer of neuronal differentiation in hippocampal neural progenitors
3854	1-Oleoyl lysophosphatidic acid sodium salt	LPA ₁ and LPA ₂ agonist; inhibits differentiation of neural stem cells into neurons
4076	P7C3	Neuroprotective compound; enhances neurogenesis <i>in vivo</i>
3044	PD 173074	Selective FGFR1 and -3 inhibitor; inhibits proliferation and differentiation of oligodendrocyte progenitors
0238	O-Phospho-L-serine	Group III mGlu agonist; enhances neuronal differentiation of progenitor cells
4847	PluriSn 1	Inhibitor of SCD1; selectively eliminates undifferentiated hPSCs from culture
4551	Purmorphamine	Smo receptor agonist; induces differentiation of mesenchymal progenitor cells into osteoblasts
0695	Retinoic acid	Endogenous retinoic acid receptor agonist; promotes ESC differentiation
5325	Rosiglitazone	Promotes differentiation of adipocytes; also potent and selective PPAR γ agonist
4366	SAG	Enhances neuronal differentiation of iPSCs into dopaminergic neurons; Smo agonist
4923	Shz 1	Activator of early cardiac genes in pluripotent stem cells; induces differentiation in M-PBMCs
3850	Sodium butyrate	HDAC inhibitor; directs differentiation of mESCs into hepatocytes
1496	SP 600125	JNK inhibitor; prevents BMP9-induced osteogenic differentiation of MSCs
3741	Stauprimide	Inhibits NME2 nuclear translocation; primes ESCs for differentiation
4749	Strontium chloride	Calcium sensing receptor (CaSR) agonist; induces osteogenic differentiation of MSCs
3300	SU 5402	Potent FGFR and VEGFR inhibitor; attenuates integrin β_4 -induced differentiation of neural stem cells
5383	TA 01	Induces cardiomyocyte differentiation from hESCs
5384	TA 02	Induces cardiomyocyte differentiation from hESCs
3877	TCS 2210	Inducer of neuronal differentiation in MSCs
3070	Thioridazine	Selective inducer of cancer SC differentiation; anticancer agent
3835	TWS 119	GSK-3 β inhibitor; induces neuronal differentiation in ESCs
3115	WHI-P 154	JAK3 inhibitor; also induces differentiation of neural progenitor cells
5148	Wnt-C59	Wnt signaling inhibitor; induces differentiation of iPSCs to cardiomyocytes
2293	Zebularine	DNA methyltransferase inhibitor; induces cardiomyocyte differentiation in MSCs
Stem Cell Proliferation, Expansion and Self-Renewal		
3336	A 769662	Potent AMPK activator; inhibits MSC proliferation
2939	A 83-01	Selective inhibitor of TGF- β RI, ALK4 and ALK7; maintains self-renewal of human iPSCs
4095	Amiodarone	Selectively inhibits proliferation of NSCs in hESC-derived cell populations
3194	BIO	Potent, selective GSK-3 inhibitor; maintains self-renewal and pluripotency of ESCs
4027	16,16-Dimethyl Prostaglandin E2	Synthetic prostaglandin E ₂ (Cat. No. 2296) derivative; regulates HSC development
4827	Garcinol	Promotes expansion of human HSCs; PCAF/p300 HAT inhibitor
3849	Gatifloxacin	Antibiotic; activates short-term renewal of ESCs
5283	HLM 006474	E2F transcription factor inhibitor; attenuates hESC proliferation
3853	ID 8	Sustains self-renewal and pluripotency of ESCs
4997	INDY	Dyrk1A/B inhibitor; impairs self-renewal of NSCs

Catalog No.	Product Name	Primary Action
4713	IQ 1	Enables Wnt/ β -catenin-driven expansion of ESCs; prevents spontaneous differentiation
3533	IWP 2	PORCN inhibitor; suppresses self-renewal in R1 ESCs
1130	LY 294002	Prototypical PI 3-kinase inhibitor; suppresses proliferation of mESCs
3044	PD 173074	Selective FGFR1 and -3 inhibitor; inhibits proliferation and differentiation of oligodendrocyte progenitors
1213	PD 98059	MEK inhibitor; enhances ESC self-renewal
4433	Pluripotin	Dual ERK1/RasGAP inhibitor; maintains ESC self-renewal
2296	Prostaglandin E ₂	Induces hematopoietic stem cell proliferation
4978	Pyrintegrin	Enhances survival of human ESCs following enzymatic dissociation
1202	SB 203580	Selective inhibitor of p38 MAPK; stimulates neural stem cell proliferation
1616	SB 216763	GSK-3 inhibitor; maintains mouse ESCs in a pluripotent state
1614	SB 431542 GMP	Induces proliferation, differentiation and sheet formation of ESC-derived endothelial cells
3848	Sinomenine	Stimulates short-term renewal of human ESCs <i>in vitro</i>
3847	Theanine	Promotes hESC self-renewal
3114	Troglitazone	Selective PPAR γ agonist; inhibits growth of hematopoietic cell lines
5413	WH-4-023	Supports self-renewal of naive hESCs
1254	Y-27632 GMP	Selective p160ROCK inhibitor; increases survival rate of human ESCs undergoing cryopreservation
Stem Cell Signaling		
1515	17-AAG	Selective Hsp90 inhibitor; protects neuroprogenitor cells against stress-induced apoptosis
3299	AMD 3100	Highly selective CXCR4 antagonist; mobilizes hematopoietic stem cells <i>in vivo</i>
5051	BIO 5192	Integrin $\alpha_4\beta_1$ inhibitor; mobilizes HSCs and progenitors
3874	BIO-acetoxime	Selective GSK-3 α/β inhibitor; inhibits CD8 ⁺ T cell effector differentiation
5050	CASIN	Cdc42 GTPase inhibitor; functionally rejuvenates aged hematopoietic SCs
4529	Ciliobrevin A	Hedgehog (Hh) pathway antagonist; inhibits ciliogenesis
1769	Flurbiprofen	Cyclooxygenase inhibitor; regulates prostate stem cell antigen
3889	GANT 58	GLI1 antagonist; inhibits Hh signaling
3191	GANT 61	GLI antagonist; inhibits Hedgehog (Hh) signaling
4474	20(S)-Hydroxycholesterol	Allosteric activator of Hedgehog (Hh) signaling; induces Smo accumulation
3532	endo-IWR 1	Wnt/ β -catenin signaling inhibitor; axin stabilizer
3341	JK 184	Downstream Hh signaling pathway inhibitor; inhibits alcohol dehydrogenase 7
2197	L-755,507	Enhances CRISPR-mediated homology-directed repair (HDR) efficiency in human iPSCs
4079	Niclosamide	STAT3 and mTORC1 signaling inhibitor; antineoplastic against AML stem cells
1267	Pifithrin- α	p53 inhibitor; suppresses self-renewal of embryonic stem cells
3324	QS 11	ARFGAP1 inhibitor; modulates Wnt signaling pathway
3667	SR 3677	Potent, selective Rho-kinase (ROCK) inhibitor
4855	WIKI4	Tankyrase inhibitor; inhibits Wnt signaling
3748	XAV 939 GMP	Tankyrase inhibitor; promotes cardiomyogenesis
Tocriscreen Collections		
5060	Tocriscreen Stem Cell Toolbox	80 Stem Cell modulators supplied pre-dissolved in DMSO (250 μ L 10mM solutions)