

Stem Cell Fate Regulators

The tremendous advances achieved recently in the area of Stem Cell Biology have brought renewed interest and hope for potential treatment of several diseases including cancer, cardiovascular disease, diabetes, musculoskeletal disease, and neurodegenerative disease. Natural and synthetic small molecules have been shown to be useful chemical tools for controlling and manipulating the fates of cells. Small molecules can target cell signaling pathways and affect DNA replication, cell differentiation, tumor metastasis and apoptosis. More recently, small molecules have been tested for stem cell self-renewal and differentiation capabilities in potential approaches to regenerative medicine. BioVision is proud to offer a variety of cell-permeable small molecule Stem Cell Fate Regulators (see the table below) to our customers.

Differentiation

Product Name	Cat. No.	VWR Cat. No.	Size	CAS. No.
Cardiogenol C hydrochloride	1926	10191-708	5 mg	1049741-55-0
Cardiogenol C hydrochloride	1926	10191-710	25 mg	1049741-55-0
Compound 1	1688	10013-834	5 mg	N/A
Cyclopamine	1578	10187-622	5 mg	4449-51-8
Cyclopamine-KAAD	1910	10188-476	50 µg	306387-90-6
Cyclosporine A	1522	10187-470	100 mg	59865-13-3
Cyclosporine A	1522	10187-472	1 g	59865-13-3
DAPT	1855	10188-316	5 mg	208255-80-5
Dexamethasone	1042	10187-272	1 ml	50-02-2
Dexamethasone	1042	10187-274	10 g	50-02-2
Dexamethasone	1042	10187-276	1 g	50-02-2
Forskolin, Coleus Forskohlii	1531	10187-482	5 mg	66575-29-9
Forskolin, Coleus Forskohlii	1531	10190-956	25 mg	66575-29-9
GANT58	1812	10187-886	5 mg	64048-12-0
GANT58	1812	10187-888	25 mg	64048-12-0
GANT61	1892	10191-160	5 mg	500579-04-4
Geldanamycin	1564	10187-558	1 mg	30562-34-6
Geldanamycin	1564	10187-560	5 mg	30562-34-6
Hh Signaling Pathway Antagonist	1659	10187-812	1 mg	330796-24-2
JK 184	1726	10187-970	1 mg	315703-52-7
Kenpaullone	1904	10188-456	1 mg	142273-20-9
Neuropathiazol	1903	10188-452	5 mg	880090-88-0
Neuropathiazol	1903	10188-454	25 mg	880090-88-0
Purmorphamine	1672	10187-832	5 mg	483367-10-8
Rapamycin	1568	10187-594	5 mg	53123-88-9
Rapamycin	1568	10187-596	50 mg	53123-88-9
EZSolution™ Rapamycin	1746	10188-026	5 mg	53123-88-9
Reversine	1851	10188-300	1 mg	656820-32-5
Reversine	1851	10188-302	5 mg	656820-32-5

N/A: Not Available

Product Name	Cat. No.	VWR Cat. No.	Size	CAS. No.
Robotnikinin	1923	10188-516	1 mg	1132653-79-2
SB-431542	1674	10187-836	1 mg	301836-41-9
SB-431542	1674	10187-838	5 mg	301836-41-9
EZSolution™ SB-431542	1872	10188-366	1 mg	301836-41-9
Smo Agonist, SAG	1939	10188-548	500 µg	912545-86-9
Smo Agonist, SAG	1939	10188-550	1 mg	912545-86-9
Sodium butyrate	1609	10187-720	1 g	156-54-7
Tomatidinehydrochloride	1893	10191-162	25 mg	6192-62-7
Trichostatin A	1606	10187-712	1 mg	58880-19-6
WHI-P131	1853	10188-308	5 mg	202475-60-3
WHI-P131	1853	10188-310	25 mg	202475-60-3

Induced Pluripotent Stem (iPS) Cells & Reprogramming

Product Name	Cat. No.	VWR Cat. No.	Size	CAS. No.
5-Azacytidine	1854	10188-312	50 mg	320-67-2
5-Azacytidine	1854	10188-314	250 mg	320-67-2
(±) –Bay K 8644	1682	10187-892	5 mg	71145-03-4
BIX 01294	1678	10187-578	5 mg	935693-62-2
BIX 01294	1678	10187-576	25 mg	935693-62-2
8-Br-cAMP	1837	10191-140	5 mg	76939-46-3
8-Br-cAMP	1837	10188-256	25 mg	76939-46-3
PS48	1869	10188-354	5 mg	1180676-32-7
PS48	1869	10188-356	25 mg	1180676-32-7
PS48	1869	10188-358	100 mg	1180676-32-7
RepSox	1894	10191-164	5 mg	446859-33-2
RepSox	1894	10188-424	25 mg	446859-33-2
RG 108	1679	10187-580	10 mg	48208-26-0
RG 108	1679	10187-842	30 mg	48208-26-0
Thiazovivin	1681	10187-846	1 mg	1226056-71-8
Thiazovivin	1681	10187-890	5 mg	1226056-71-8
EZSolution™ Thiazovivin	1736	10187-998	1 mg	1226056-71-8
Tranylcypromine Hemisulfate (Parnate)	1816	10188-192	25 mg	13492-01-8
Tranylcypromine Hemisulfate (Parnate)	1816	10188-194	100 mg	13492-01-8
Valproic Acid, Sodium Salt	1647	10187-782	200 mg	1069-66-5

Self-Renewal & Survival

Product Name	Cat. No.	VWR Cat. No.	Size	CAS. No.
A 83-01	1725	10187-968	1 mg	909910-43-6
BIO	1673	76270-064	5 mg	667463-62-9
BIO	1673	76270-066	25 mg	667463-62-9
CI-1040 (PD184352)	1585	10187-652	1 mg	212631-79-3
CI-1040 (PD184352)	1585	10187-650	5 mg	212631-79-3

Product Name	Cat. No.	VWR Cat. No.	Size	CAS. No.
CI-1040 (PD184352)	1585	10187-648	25 mg	212631-79-3
CHIR 99021	1677	10187-574	5 mg	252917-06-9
CHIR 99021	1677	10187-572	25 mg	252917-06-9
EZSolution™ CHIR99021	1748	10188-030	5 mg	252917-06-9
GSK-3 Inhibitor, TWS-119	1655	10187-804	2 mg	601514-19-6
Heparin-Binding Peptide I	1821	10188-208	5 mg	N/A
Heparin-Binding Peptide I	1821	10188-210	25 mg	N/A
Heparin-Binding Peptide II	1822	10188-212	5 mg	N/A
Heparin-Binding Peptide II	1822	10188-214	25 mg	N/A
Heparin-Binding Peptide III	1823	10188-216	5 mg	N/A
Heparin-Binding Peptide III	1823	10188-218	25 mg	N/A
Integrin Ligand Peptide	1824	10188-220	5 mg	N/A
Integrin Ligand Peptide	1824	10188-222	25 mg	N/A
IQ-1	1663	10187-814	1 mg	331001-62-8
PD 173074	1675	10187-840	1 mg	219580-11-7
PD184352 (CI-1040)	1585	10187-652	1 mg	212631-79-3
PD184352 (CI-1040)	1585	10187-650	5 mg	212631-79-3
PD184352 (CI-1040)	1585	10187-648	25 mg	212631-79-3
EZSolution™ PD184352	1871	10188-364	1 mg	212631-79-3
PD0325901	1643	10187-762	2 mg	391210-10-9
PD0325901	1643	10187-764	5 mg	391210-10-9
PD0325901	1643	10187-766	25 mg	391210-10-9
PD 98059	1666	10187-816	5 mg	167869-21-8
Pifithrin-α	1554	10187-524	10 mg	63208-82-2
EZSolution™ Pyrintegrin	1737	10188-000	1 mg	508-02-1
Pyrintegrin	1729	10187-978	1 mg	N/A
Pyrintegrin	1729	10187-980	5 mg	N/A
QS11	1680	10187-844	5 mg	944328-88-5
SU-5402	1645	10187-772	500 µg	215543-92-3
EZSolution™ Thiazovivin	1736	10187-998	1 mg	1226056-71-8
Thiazovivin	1681	10187-846	1 mg	1226056-71-8
Thiazovivin	1681	10187-890	5 mg	1226056-71-8
Y-27632	1596	10187-694	1 mg	146986-50-7
Y-27632	1596	10187-696	5 mg	146986-50-7
Y-27632	1596	10187-698	50 mg	146986-50-7
EZSolution™ Y-27632	1784	10187-876	5 mg	146986-50-7
XAV 939	1727	10187-972	1 mg	284028-89-3

N/A: Not Available

DiscoveryPak™ Stem Cell Fate Regulator Sets

DiscoveryPak™ Stem Cell Fate Regulator Set I Cat. No. 10191-878 A set containing three inhibitors useful for sustaining embryonic stem (ES) cell self-renewal. The set contains the following inhibitors: 5 mg of the GSK-3β Inhibitor CHIR 99021 (Cat. No. 10187-574); 5 mg of MEK Inhibitor PD 184352 and 500 µg of FGFR Inhibitor SU-5402 (Cat. No. 10187-774).	DiscoveryPak™ Stem Cell Fate Regulator Set II Cat. No. 10191-880 A convenient set of eight small molecules useful for stem cell differentiation, self-renewal and reprogramming. The set contains the following products: 5 mg of G9a HMTase Inhibitor BIX01294 (Cat. No. 10187-578); 5 mg of the GSK-3β Inhibitor CHIR 99021 (Cat. No. 10187-574); 5 mg of MEK Inhibitor PD 184352 (Cat. No. 76288-476); 2 mg of MEK Inhibitor PD0325901 (Cat. No. 10187-762); 10 mg of DNMT Inhibitor RG-108 (Cat. No. 10187-580); 1 mg of ALK5 Inhibitor SB-431542 (Cat. No. 10187-836); 500 µg of FGFR Inhibitor SU-5402 (Cat. No. 10187-774) and 200 mg of VPA (Cat. No. 10187-782).
DiscoveryPak™ Stem Cell Fate Regulator Set III Cat. No. 10190-092 A convenient set of three small molecules useful for promoting the transformation of fibroblasts into stem cells. The set contains the following products: 2 mg of MEK Inhibitor PD0325901 (Cat. No. 10187-762); 1 mg of ALK5 Inhibitor SB-431542 (Cat. No. 10187-836) and 1 mg of cell survival enhancing agent Thiazovivin (Cat. No. 10187-846).	DiscoveryPak™ Stem Cell Fate Regulator Set IV Cat. No. 10190-094 A convenient set of three small molecules that help in promoting the survival of embryonic stem cells (ESCs). The set contains the following products. 1 mg each of ESC survival promoters, Pyrintegrin (Cat. No. 10187-978) and Thiazovivin (Cat. No. 10187-846) and 1 mg of ROCK inhibitor Y-27632, Dihydrochloride.
DiscoveryPak™ Stem Cell Fate Regulator Set V Cat. No. 10191-384 A convenient set of five small molecules useful for generating human induced pluripotent stem cells (iPSC) from primary cells. The five products are: 1 mg of A-83-01 (Cat. No. 10187-968), 2 mg of PD-0325901 (Cat. No. 10187-762), 5 mg of PS48 (Cat. No. 10188-354), 1 g of Sodium Butyrate (Cat. No. 10187-720) and 25 mg of Tranylcypromine hemisulfate (Parnate) (Cat. No. 10188-192).	DiscoveryPak™ Stem Cell Fate Regulator Set VI Cat. No. 10190-104 A convenient set of five small molecules useful for self-renewal in stem cells and induced pluripotent stem cells (iPSCs). The five products are: 1 mg of A-83-01 (Cat. No. 10187-968), 5 mg of CHIR99021 (Cat. No. 10187-574), 1 mg of IQ-1 (Cat. No. 10187-814), 2 mg of PD-0325901 (Cat. No. 10187-762), and 500 µg of SU-5402.
DiscoveryPak™ Stem Cell Fate Regulator Set VII Cat. No. 10190-106 A convenient set of ten small molecules useful for enhancing the reprogramming efficiency. The ten products are: 5 mg of (±) -Bay K 8644 (Cat. No. 10187-892), 5 mg of BIX01294 (Cat. No. 10187-578), 5 mg of PS-48 (Cat. No. 10188-354), 5 mg of RepSox (Cat. No. 10191-164), 1 mg of Reversine (Cat. No. 10188-300), 10 mg of RG 108 (Cat. No. 10187-580), 1 mg of SB-431542 (Cat. No. 10187-836), 1 g of Sodium Butyrate (Cat. No. 10187-720), 25 mg of Tranylcypromine hemisulfate (Parnate) (Cat. No. 10188-192), and 200 mg of Valproic Acid, sodium salt (Cat. No. 10187-782).	DiscoveryPak™ Neuronal Cell Induction Small Molecules Set Cat. No. 75837-948 A convenient set containing eight small molecules useful for induction of neuronal cells (hcnNs) from human fibroblasts. The eight products are: 200 mg of the HDAC inhibitor Valproic Acid Sodium Salt (Cat. No. 10187-782); 5 mg of GSK-3 inhibitor CHIR99021 (Cat. No. 10187-574); 5 mg of TGFβ inhibitor RepSox (Cat. No. 10191-164); 5 mg of cAMP activator Forskolin (Cat. No. 10187-482); 5 mg of JNK Inhibitor SP600125 (Cat. No. 10187-824); 1 mg of PKC inhibitor Gö6983 (Cat. No. 75837-256); 5 mg of ROCK inhibitor Y-27632 HCl (Cat. No. 10187-694); and 5 mg of AMPK inhibitor Dorsomorphin (Cat. No. 10191-648). Ref: Hu, W., et al. (2015). Cell Stem Cell 17, 204-212.
DiscoveryPak™ Stem Cell Fate Regulator Set X Cat. No. 75837-940 A convenient set of two small molecules useful for increasing the cloning efficiency in individualized human pluripotent stem cells (hPSCs). The two modulators are: 5 mg of Pioglitazone (Cat. No. 10188-384) and 5 mg of Y-27632 HCl (Cat. No. 10187-694). Ref: Kajabadi, N.S., et al. (2015). J. Biol. Chem. 290, 26303- 13	StemBoost™ Neuronal Cell Induction Cocktail Set (100X), Sterile-Filtered Cat.No. 75837-944 A convenient, sterile-filtered cocktail solution (100X, in DMSO) containing the following six small molecules: CHIR99021 (Cat. No. 10187-574), a GSK-3β inhibitor, 0.3 mM; RepSox (Cat. No. 10191-164), a TGFβ inhibitor, 0.1 mM; Forskolin (Cat. No. 10187-482), a cAMP activator, 1.0 mM; SP600125 (Cat. No. 10187-824), a JNK inhibitor, 1.0 mM; Gö6983 (Cat. No. 75837-256), a PKC inhibitor, 0.5 mM and Y-27632 HCl (Cat. No. 10187-694), a ROCK inhibitor. Also provided separately is a sterile-filtered solution (100X, in DI water) of the HDAC inhibitor Valproic Acid Sodium Salt (50 MM). Ref: Hu, W., et al. (2015). Cell Stem Cell 17, 204-212.