

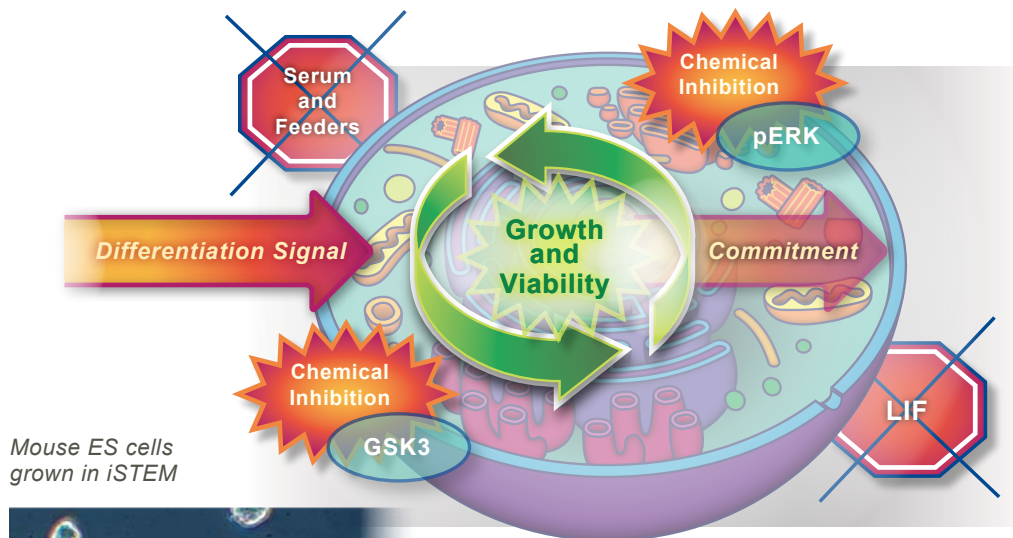
iSTEM®

Unparalleled 'Ground State' Maintenance of Authentic Mouse Embryonic Stem (ES) Cells

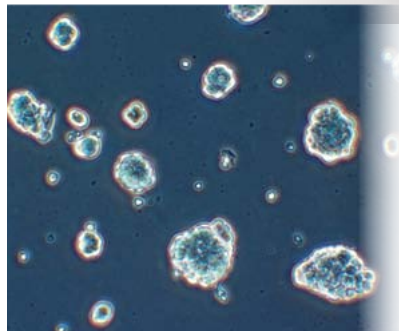


SC Proven® Cell Culture Products undergo rigorous quality control procedures before release. The SC Proven stamp is your assurance that every product bearing our trademark meets impeccable quality standards.

Serum-free **iSTEM** captures germline competent mouse ES cells in their ground state by blocking the inductive pathways of differentiation with selective small molecule inhibitors. Using **iSTEM**, ground state mouse ES cells can be efficiently maintained and propagated at ≥99% purity in feeder-free, cytokine-free culture conditions.



Mouse ES cells grown in **iSTEM**



Ground State Self-Renewal

Eliminating the need for serum, feeders and the cytokine LIF, three small molecule inhibitors acting on the ERK pathway and on glycogen synthase kinase-3 enable pure ground state self-renewal of murine embryonic stem cells by preventing commitment/differentiation and simultaneously aid with clonal level survival and enhance cellular growth capacity.

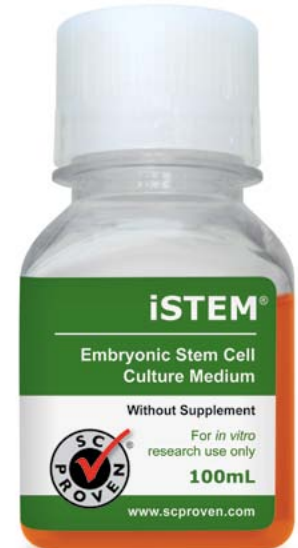
iSTEM is ideally suited for studying the molecular basis of pluripotency due to its demonstrated ability to eliminate the background stimulatory signalling pathway noise associated with traditional ES cell culture.

Other applications of **iSTEM** include:

- Study of basic developmental biology and embryology owing to the truly naïve state of the cells
- Derivation of ES cell lines from previously non-permissive mouse strains¹

References

1 Ying QL, Wray J, Nichols J, Battle-Morera L, Doble B, Woodgett J, Cohen P, Smith A (2008) The ground state of embryonic stem cell self-renewal. *Nature* 453:519-52



To Order...

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