

GS1-R™

Catalogue Number	SF-PS-01-100
Size	GS1-R™ consists of 2 components which must be combined prior to use: <ul style="list-style-type: none">• 100 mL media• 100 µL supplement (NOTE : Supplement contains DMSO) Larger volumes are available upon request.
Applications	Derivation and long-term maintenance of rat embryonic stem (ES) cells in serum-free conditions, and in the absence of growth factors and cytokines.
Description	GS1-R™ is a proprietary, defined, cell culture media formulation for the derivation, maintenance and propagation of rat ES cells in the 'ground state' of self-renewal ^{1,2} . The medium contains selective small molecule inhibitors that act to eliminate differentiation-inducing signals and promote cell survival, enabling the maintenance of the pluripotent ground state without the requirement for stimulatory cytokines or growth factors.
Storage	Upon receipt, store the media at -20°C and the supplement at -80°C until ready to use. When stored under these conditions, the products are stable for 3 months from the date of manufacture (see label). Once thawed and combined, store at 4°C and use within 2 weeks.
Preparation	Thaw the 100 µL supplement at room temperature (for no longer than 5 minutes), and microfuge immediately. Add aseptically to warmed medium and mix thoroughly to ensure the supplement is thoroughly distributed. Do not filter sterilize.
Additional reagents required	Rat ES cells will require co-culture support from feeder cells; Stem Cell Sciences recommends inactivated mouse embryonic fibroblasts seeded at 2-4x10 ⁴ cells/cm ² on pre-gelatinised culture vessels. Further supplementation with an activating STAT3 signalling cytokine is optional.
Quality control	SC Proven® media products undergo rigorous quality control procedures before release.
References	<ol style="list-style-type: none">1. Li P, <i>et al.</i> Germline Competent Embryonic Stem Cells Derived from Rat Blastocysts. <i>Cell</i> 135(7):1299-310, 2008.2. Buehr M, <i>et al.</i> Capture of Authentic Embryonic Stem Cells from Rat Blastocysts. <i>Cell</i> 135(7):1287-98, 2008.