

# Certificate of Analysis

**Sprague-Dawley (SD) Rat Neural Stem Cells**

Catalog No. RASNF-01001

Lot Number: 111110F01

Cryopreservation Date: 2011-11-10

Passage Number: 2

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## Viability

Cells are assayed for viability post-thaw using vital staining assay with trypan blue.

Specification: Cells should exhibit  $\geq 70\%$  viability.

## Sterility

Bacterial and Fungal Contamination: Samples are inoculated and cultured on blood agar plate, thioglycolate broth, tryptocase soy broth and sabouraud dextrose agar.

Specification: No growth must be observed.

Mycoplasma: Samples are tested for mycoplasma contamination using a PCR-based assay and direct culture.

Specification: Results must be negative.

Endotoxin: Samples are tested for endotoxin contamination with LAL test.

Specification: Results must show a concentration of  $\leq 25\text{EU/ml}$ .

## Purity

Cells are assayed for purity using immunohistochemistry analysis of cell surface antigen expression after cryopreservation. Cells are immunostained with Nestin.

Specification: Cells must show  $\geq 75\%$  positivity for expression of cell surface antigens Nestin. Cells must show  $\leq 10\%$  positivity for expression of cell surface antigens GFAP, Galc and beta-III tubulin.

## Proliferation Ability

The cells are characterized by their ability to proliferate in culture with neurosphere morphology for  $\geq 5$  passages, and  $\leq 5\%$  cells exhibit spontaneous differentiation in each passage.

## Differentiation Ability

The cells are assayed after cryopreservation for their ability to differentiate into Neuron, Astrocyte and Oligodendrocyte, about 50% cells are stained with GFAP, 10% cells are stained with beta-III tubulin, and 2% cells are stained with Galc that detects each cell type.

**Results:**

All specifications have been met.

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