

04/02/2014

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Certificate of Analysis

Customer: Rain International**Sample Identification:**

Batch #: 14096c

Date Received: 02/27/2014

Results:

Description	BL ID	Analysis	Marker	Maximum SIRT1 Expression Change (%)	Effective Concentration	Units
Soul (2oz Pouch), liquid, IN132773	14-0119	Cellular Anti-aging Assay	SIRT1	62.4	11.83	mg/mL*

Cellular Anti-aging Assay (SIRT1) determines the impact of a test material on expression/production level of SIRT1 in human cells. SIRT1 serves as an anti-aging biomarker.

* Viscous liquid sample. The tested concentrations are expressed as mg of sample per ml of assay buffer.

Method Description:

Cellular Anti-aging Assay (SIRT1) measures the anti-aging ability of a material using SIRT1 production in human cells as a biomarker for anti-aging. SIRT1 is a protein that is believed to play important roles in longevity and reduction of age-related diseases. Previous studies have shown that when mammals age, SIRT1 expression decreases, where induction and activation of SIRT1 has been associated with extended lifespan. These studies have triggered the search for SIRT1 activators that may be used as dietary supplements to promote health and longevity.

Cellular Anti-aging Assay (SIRT1 assay) determines the ability of a test material to stimulate SIRT1 protein expression in human cells, which translates to the material's anti-aging potential. SIRT1 expression level of human cells treated with and without test materials are compared, and maximum percentage of the SIRT1 expression change is reported. The concentration used that induced maximum percentage of the SIRT1 expression change is noted.

Released on behalf of Brunswick Laboratories by

Jin Ji, Ph.D.

Chief Technology Officer

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