UAB "LT Biotech"

Į.K. 302303586, PVM kodas LT 100004741118,
Rugių 21-24, LT-08419, Vilnius Reg. Nr. 127918,
V.Į. Registrų centras Vilniaus filialas
Tel/fax +370 5 216 02 27

NCS21 Supplement (50x), Serum-free LTGA05 Hybridoma Supplement, Serum-free LTGA06 ITS (100x), Insulin, Transferrin, Selenium LTGA07 N2 Supplement (100x), Serum-free LTGA08

Supplements

Product	Volume	Cat. No.
NCS21 Supplement (50x), Serum-free	10 ml	LTGA05
Hybridoma Supplement, Serum-free	50 ml	LTGA06
ITS (100x), Insulin, Transferrin, Selenium	10 ml	LTGA07
N2 Supplement (100x), Serum-free	5 ml	LTGA08

N2 Supplement

Product	Volume	Cat. No.
N2 Supplement (100x), Serum-free	5 ml	LTGA08

N2 Supplement is a serum-free chemically defined supplement based on Bottenstein's N2 formulation. This supplement is recommended for the growth and expression of neuroblastomas and for the survival and expression of post-mitotic neurons in primary cultures from both the peripheral nervous system (PNS) and the central nervous system (CNS). N2 Supplement is provided as a 100x concentrate.

Applications

N2 Supplement can be used in combination with NCS21 or NCS27 Supplement for:

- Differentiation of ES cells into neuron lineage (neuron andastrocytes).
- Differentiation of neural stem cells into astrocytes andneurons.
- Optimal for serum free growth forneuroblastomas.

Formulation

Component	µg/ml
Human Transferrin (holo)	10000.00
Human Recombinant Insulin	500.00
Progesterone	0.63
Putrescine	1611.00
Sodium Selenite	0.52

Reference

Bottenstein, J. E. (1985) Cell Culture in the Neurosciences, Bottenstein, J. E. and Harvey, A. L., editors, p. 3, Plenum Press: New York and London.

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NCS21 Supplement (50x), Serum-free

Product	Volume	Cat. No.
NCS21 Supplement (50x), Serum-free	10 ml	LTGA05

NCS21 Supplement is a serum-free supplement for neuronal cell cultures. It is an optimized and modified formulation of B27® Supplement[1] (B27® is a registered trade mark of Life Technologies Corporation).
NCS21 Supplement is suitable for the long-term viability and growth of hippocampal and other neurons of the central nervous (CNS) and peripheral nervous system (PNS). The supplement is a chemically defined 50x concentrate and con- tains vitamins, hormones and other growth factors including insulin human transferrin, catalase, antioxidants and fatty acids.

Applications

- Differentiation of ES cells into neuron lineage (neuron andastrocytes).
- Differentiation of neuronal stem cells into astrocytes andneurons.
- Optimal growth and long-term survival of rat hippocampal neurons (fetal andadult).
- Survival of neurons from embryonic rat striatum, substantia nigra, septum and cortex, and neonatal rat cerebellum (fetal and adult).

Composition

L-Carnitine	Retinyl Acetate
Corticosterone	Sodium Selenite
Ethanolamine	T3 (Triodo-l-Thyronine)
D(+)-Galactose	DL-α-Tocopherol
L-Glutathion reduced	DL-α-Tocopherol Acetate
Linoleic Acid	**Proteins:**
Linolenic Acid	Bovine Serum Albumin
Lipoic Acid	Catalase
Progesterone	Human Recombinant Insulin
Putrescine	Superoxide Dismutase
Retinol	Human Transferrin (holo)

Reference

Chen *et al.* (2008), *J Neurosci Methods*; 171 (2): 239–247.

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Insulin Transferrin Selenium (ITS)

Product	Volume	Cat. No.
ITS (100x), Insulin, Transferrin, Selenium	10 ml	LTGA07

ITS (Insulin, Transferrin, Selenium) is a chemically defined supplement for a variety of cell culture applications. ITS sup- plement contains components which are required for optimal performance of serum-free media. Supplementation of ITS to different conventional nutrient media substantially reduces the FBS requirement for routine maintenance of many cell lines. ITS is provided as a 100x concentrate.

Applications

- Serum-free cultivation.
- Reduction of FBS requirements.
- Cultivation of e.g. CHO, Hybridoma, MDCK and Vero cells.
- Supplement in murine embryonic stem cell culture.

Formulation

Component	µg/ml
Human Recombinant Insulin	1000.00
Human Transferrin (holo)	550.00
Sodium Selenite	0.68

Reference

Bottenstein *et al.* (1979), *Methods in Enzymology*; 58: 94–109.

Hybridoma Supplement

	Volume	Cat. No.
Hybridoma Supplement, Serum-free	50 ml	LTGA06

Hybridoma cells result from fusion of an antibody producing B-cell from the immune system with a tumor cell. To sup- port hybridoma development and achieve an optimal cell density as well as cloning efficiency growth factors and serum (10 to 20 %) are required. Hybridoma Supplement is a chemically defined growth promoting supplement containing in- sulin, ethanolamine, hydrocortisone, retinoic acid, linoleic acid and other growth promoting factors. As supplement to culture medium it supports the growth of hybridoma in a manner feeder cells have been used before. The disadvantages occurring by the use of feeder cells may include: overgrowth of newly formed hybridomas; source of contamination, competition for nutrients, and variations in growth factor concentrations.
Hybridoma Supplement can be used in culture medium under serum-free conditions. The low protein content facilitates the isolation and purification of produced antibodies. Hybridoma Supplement is provided as a 10x concentrate.

Applications

- Improvement of Hybridoma Growth after Fusion.
- Improvement of cloning efficiency of hybridomas.
- Production of Monoclonal Antibodies under serum-free conditions.