

## Datasheet and Instructions for Use

# NS21 Supplement

## Defined Supplement for Serum-free Neuronal Cell Culture

Product	Description	Catalogue-No.	Size
NS21 Supplement	Supplement for neuronal cell culture 50x, sterile	P07-20021	10 ml
NS21 Supplement	Supplement for neuronal cell culture 50x, non-sterile	P07-20001	10 ml

### Product description

In vitro cultures of primary neuronal cells are a mainstay of neurobiology research. Many important experimental findings have taken advantage of defined culture media rather than serum additives, because serum contains undefined factors. Therefore, serum-free neuronal cell culture is used to achieve more defined experimental conditions and a better interpretation of results. To culture neurons in the absence of serum, defined supplements such as B27 are widely used. However, available supplements exhibit some variability in their capability to support neurons in culture. NS21 Supplement is a newly developed serum substitute for neuronal cultures of cells from the central and peripheral nervous system. NS21 Supplement supports neuronal cultures of high quality displaying typical morphological characteristics, formation of synapses, and postsynaptic responses.

### Storage conditions

Storage: -20° C (in the dark)  
Stability: 2 years from date of production  
Size: 10 ml – others size on request

### Composition

NS21 Supplement is composed of 21 essential ingredients such as bovine serum albumin, insulin, holo transferrin, fatty acids, hormones and vitamins.

### Suitability

NS21 Supplement has been optimized for maturation and long-term culture of primary mouse and rat neurons in culture.

### Special Advantages

NS21 Supplement has been optimized for long-term growth of primary mouse and rat neurons in culture without the need for astrocyte feeder cells. NS21 Supplement has been shown to improve prolonged viability of rat and mouse primary neurons *in vitro*, as well as enhance outgrowth of primary neurons in culture. In addition, NS21 Supplement supports the growth and maintenance of primary neuronal cells at low or high density plating.

- Significantly improves prolonged viability of neurons in vitro
- Enhances neurite outgrowth of cultured primary neurons
- Supports growth of neuronal cells at low or high density plating

### Instructions for Use

NS21 Supplement (50x) is used in combination with Neuropan Basal Medium (P04-00900). Use 10 ml NS21 Supplement for 500 ml of Neuropan Basal Medium. Supplemented medium can be stored in the dark at 2-8° C for up to 4 weeks.

### Please note:

For Cat. No. P04-20001 NS21 Supplement 50x non-sterile, supplied as per original description (1), after addition of the supplement to Neuropan Basal Medium the complete medium has to be filtered at 0.2 µm to obtain a sterile cell culture medium.

### Reference:

(1) Chen Y. et al. NS21: re-defined and modified supplement B27 for neuronal cultures.  
J Neurosci Methods. 2008;171:239.

### Technical Support

For more information, questions or comments please contact your local PAN-Biotech partner or the technical support at PAN-Biotech via email ([info@pan-biotech.com](mailto:info@pan-biotech.com)) or phone +49-8543-601630.