

# NeuroCult™ NS-A Proliferation Kit (Rat)

## Medium for Expansion of Rat Neural Stem and Progenitor Cells

Catalog #05771

1 Kit



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FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

## Product Description

The NeuroCult™ NS-A Proliferation Kit (Rat)\* is a standardized serum-free medium for the culture of rat neural stem and progenitor cells as neurospheres. NeuroCult™ NS-A Proliferation Kit (Rat) must be supplemented with appropriate cytokines (not included). The complete medium (containing cytokines) has been optimized to maintain rat neural stem cells for extended periods of time without the loss of their self-renewal, proliferation, or differentiation potential.

## Product Information

The following components are sold as a complete kit (Catalog #05771) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
NeuroCult™ NS-A Basal Medium (Rat)	05770	450 mL	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.
NeuroCult™ NS-A Proliferation Supplement (Rat)**†	05773	50 mL	Store at -20°C.	Stable until expiry date (EXP) on label.

\*\*This product contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

†Components of NeuroCult™ NS-A Proliferation Supplement (Rat) are pretested and selected to support the growth and expansion of rat neural stem and progenitor cells when combined with NeuroCult™ NS-A Basal Medium (Rat). Cytokines are not included.

## Preparation of Complete NeuroCult™ NS-A Proliferation Medium (Rat)

Use sterile techniques to prepare complete NeuroCult™ NS-A Proliferation Medium (Basal Medium + Proliferation Supplement + cytokines).

The following example is for preparing 500 mL of complete medium. If preparing other volumes, adjust accordingly.

NOTE: Cytokines are not included in the medium or the supplement and must be added separately. This product does not contain antibiotics. If desired, add penicillin and streptomycin, and use medium within 1 week.

1. Thaw NeuroCult™ NS-A Proliferation Supplement (Rat) at 37°C. Mix thoroughly.

NOTE: Once thawed, use immediately or aliquot and store at -20°C. Do not exceed the shelf life of the supplement. Do not freeze-thaw more than twice.

NOTE: A white precipitate may form upon storage at -20°C. The precipitate will disappear after complete thawing at 37°C and mixing the contents well.

2. Add 50 mL of Proliferation Supplement to 450 mL of Basal Medium.

NOTE: If not used immediately, store at 2 - 8°C for up to 1 month. Avoid repeated exposure of medium to room temperature (15 - 25°C) and light during experiments.

3. Add cytokines. STEMCELL Technologies recommends adding:

- 20 ng/mL EGF, Human, Recombinant (Catalog #02633)
- 10 ng/mL bFGF, Human, Recombinant (Catalog #02634)
- 2 µg/mL 0.2% Heparin Sodium Salt in PBS (Catalog #07980)

NOTE: If not used immediately, store complete NeuroCult™ NS-A Proliferation Medium (Rat) at 2 - 8°C for up to 1 week.

## Directions for Use

For complete instructions on culturing rat neural stem and progenitor cells with the NeuroCult™ NS-A Proliferation Kit (Rat), refer to the Technical Manual: In Vitro Proliferation and Differentiation of Rat Neural Stem and Progenitor Cells (Neurospheres) Using NeuroCult™ (Document #28725) available on our website at [www.stemcell.com](http://www.stemcell.com) or contact us to request a copy.

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