

Ready-CEPT™ Cell Viability Cocktail

USER GUIDE

Defined supplement for improved stem cell survival and growth

Catalog #: LSS-301-10-1, LSS-301-10-12, LSS-301-200-1, LSS-301-200-12

Product Description

Defined Bioscience's Ready-CEPT™ 1000X cocktail is a defined formulation designed for improved stem cell survival and growth during routine passaging, cryopreservation, and freeze-thaw recovery. Ready-CEPT is a single-vial cocktail of chroman-1 (a ROCK inhibitor), emricasan (a pan-caspase inhibitor), polyamines (putrescine, spermine, and spermidine; polycations for cell growth support), and trans-ISRIB (an ISR inhibitor). CEPT was originally developed at the National Institutes of Health (NIH), where it was found to improve single-cell cloning and sorting, as well as improved viability and cell health. These benefits were well-characterized in particular for genetically stable stem cell culture, with benefits in cell passaging, cryoprotection, organoid and embryoid body (EB) formation, and gene editing, with fewer apparent off-target effects compared to other similar products on the market (e.g. Y-27632). For more information, see [1, 2], referenced below.

Ready-CEPT is provided as a 1000X cocktail in a DMSO/water mixture, using animal origin-free componentry. Please contact Defined Bioscience with complete formulation requests.

Ready-CEPT 1000X is provided in liquid form in 10- and 200- μ L volumes, sufficient for 10 and 200 mL of CEPT-supplemented medium, respectively. This supplement can be used with a wide range of formulations, including Defined Bioscience's fully defined HiDef-B8 medium (Catalog # LSS-204).

Each lot of Ready-CEPT is used in combination with HiDef® B8 medium in performance testing in a culture assay evaluating using human iPSCs.

Contents and Storage

Content	Catalog #	Amount	Storage	Shelf life
Ready-CEPT™ (1 vial)	LSS-301-10-1 LSS-301-200-1	1 x 10 μ L 1 x 200 μ L	Store at -20°C protected from light	1 year from date of manufacture
Ready-CEPT™ (12-pack)	LSS-301-10-12 LSS-301-200-12	12 x 10 μ L 12 x 200 μ L	Store at -20°C protected from light	1 year from date of manufacture

Product Usage

Sterility: Use appropriate aseptic technique when handling Ready-CEPT. Our Ready-CEPT is sterile-filtered (0.22 μ m PVDF), and so additional sterilization and autoclaving are strongly discouraged. Ensure that all equipment is sterile before use.

Receipt and Preparation: Before using Ready-CEPT, ensure that the medium is stored at -20°C and is within the expiration date. Warm the medium to room temperature before use as needed, but avoid warming it above 37°C.

Supplementation: Ready-CEPT is a supplement to be added to a complete medium (e.g. HiDef-B8; Defined Bioscience Catalog # LSS-204). The resulting formulation should be supplemented with other components typically required to support the specific needs of your cells. Ready-CEPT usage in the context of additional supplements or components will need to be evaluated for your specific cell type and application. The recommended concentration of these other components can vary depending on the cell type and application. Consult the literature or manufacturer's recommendations for the appropriate supplements and concentrations for your application.

pH Adjustment: Ready-CEPT is prepared in a solution of DMSO and water. While its impact on pH when added to complete medium should be minimal, the pH of the medium may need to be adjusted depending on the supplements added, the cell type being cultured, and culture conditions. Use a pH meter or pH paper to adjust the pH to the optimal range for your cells using cell culture-grade HCl and/or NaOH as needed.

Cell Culture: Follow standard cell culture procedures for seeding, subculturing, and maintaining your cells. Avoid overconfluent cultures or using old medium, as this can lead to cell stress and reduced viability.

For Research Use Only

Storage: Ready-CEPT 1000X can be stored for up to 12 months after the manufacturing date at -20°C if protected from light. Once opened, aliquot as needed and re-freeze no more than once for later use. Storage conditions must be adjusted based on manufacturer recommendations once modified with supplemental products.

Limited Product Warranty

Defined Bioscience and/or its affiliate(s) warrant their products as set forth in the Defined Bioscience General Terms and Conditions of Sale. If you have questions, please contact Defined Bioscience at info@definedbioscience.com.

References

1. Chen, Y., et al., *A versatile polypharmacology platform promotes cytoprotection and viability of human pluripotent and differentiated cells*. Nat Methods, 2021. **18**(5): p. 528-541.
2. Tristan, C.A., et al., *Efficient and safe single-cell cloning of human pluripotent stem cells using the CEPT cocktail*. Nat Protoc, 2023. **18**(1): p. 58-80.