

PRODUCT INFORMATION



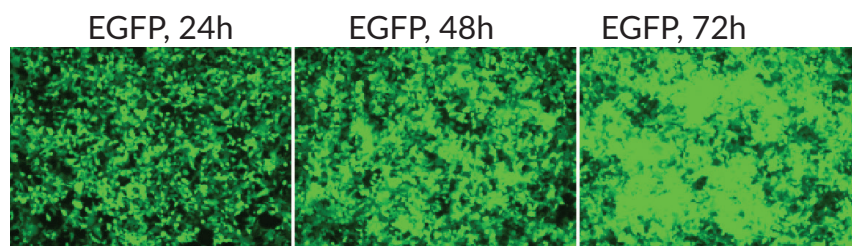
EGFP circRNA

Item No. 45063

Overview and Properties

Synonym: EGFP Circular RNA
Storage: -80°C (as supplied)
Stability: ≥1 year
Supplied as: A liquid
Concentration: ~1 mg/ml
Ex./Em. Max: 489/511 nm

Image



500 ng circRNA-EGFP was transfected into 2×10^5 HEK293 cells by Lip3000 and the brightness of EGFP increased with time after 24h, 28h, and 72h by fluorescence microscopy.

Description

EGFP circular RNA (circRNA) encodes enhanced GFP (EGFP), a variant of *A. victoria* GFP containing chromophore mutations that increase the sensitivity of the protein and displays excitation/emission maxima of 489/511 nm, respectively.¹ Exogenous circRNAs have increased stability and can produce sustained protein expression compared to mRNA.² EGFP circRNA has been used as a control for the delivery of VEGF-A mRNA in human umbilical vein endothelial cells (HUVECs) via lipid nanoparticles (LNPs).³

References

1. Zhang, G., Gurtu, V., and Kain, S.R. An enhanced green fluorescent protein allows sensitive detection of gene transfer in mammalian cells. *Biochem. Biophys. Res. Commun.* **227**(3), 707-711 (1996).
2. Wesselhoeft, R.A., Kowalski, P.S., and Anderson, D.G. Engineering circular RNA for potent and stable translation in eukaryotic cells. *Nat. Commun.* **9**(1), 2629 (2018).
3. Liu, J., Zhang, Y., Liu, C., et al. A single dose of VEGF-A circular RNA sustains in situ long-term expression of protein to accelerate diabetic wound healing. *J. Control Release* **373**, 319-335 (2024).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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