

Bright & Persistent Red Fluorescent Reporter tdTomato Self-Amplifying RNA



tdTomato Self-Amplifying RNA encodes a bright red fluorescent protein, emitting light at 581 nm. It is ideal for tracking gene expression, protein localization, and live cell imaging. As a self-amplifying RNA, it offers enhanced, prolonged expression with lower doses, making it efficient for extended studies. Croyez's tdTomato saRNA was generated through in vitro transcription, and these mRNAs are then fortified at their 5' end by modified nucleotide capping, known as Cap1. To mimic the characteristics of fully processed mature mRNAs, we incorporate a poly(A) tail at the 3' end and optimize the mRNAs to enhance stability and overall performance. This ensures that the mRNAs function similarly to naturally occurring mature mRNAs in cells.



Figure 1. 0.6×10^5 BHK21 cells were transfected with 500 ng saRNA tdTomato mRNA (unmodified) by EndoSafe reagent. Cells were subculture with 3 days intervals.

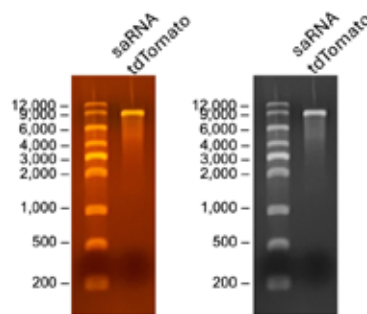


Figure 2. saRNA tdTomato was analyzed on a 1% E-gel. Lane 1: Maker: High Range RNA Ladder (cat no.:CR00005-50UL)

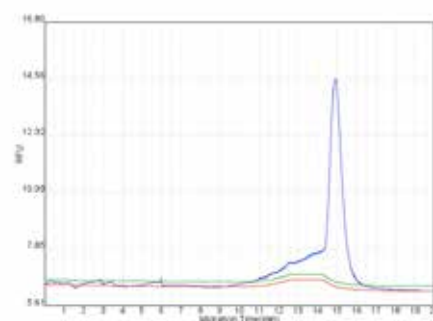
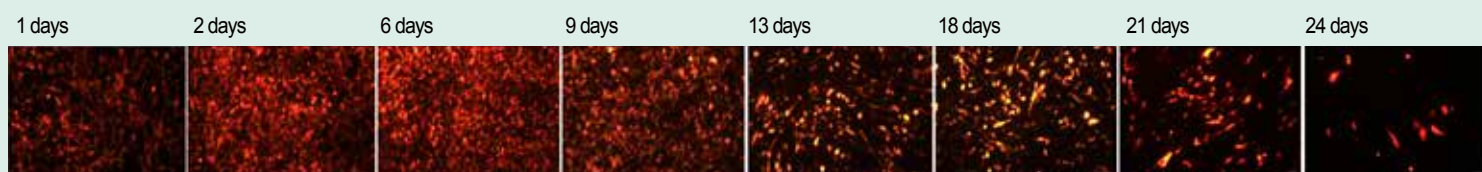


Figure 3. Capillary Electrophoresis saRNA tdTomato was analyzed by capillary electrophoresis.

► tdTomato saRNA delivers strong and durable fluorescence lasting up to 24 days.



► Applications



Long-Term Fluorescent Tracking

Sustained tdTomato expression enables extended monitoring of live cells for up to 24 days, ideal for studying cell migration, differentiation, lineage tracing, and dynamic biological processes.

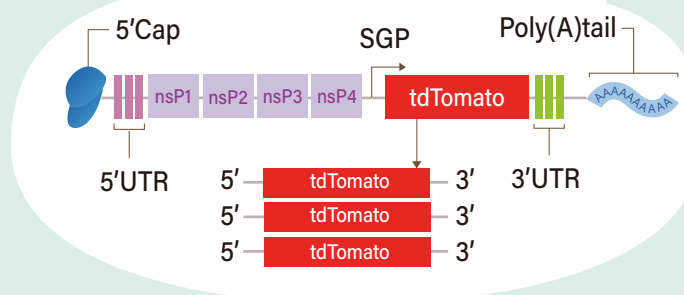
Low-Dose Reporter Expression

saRNA's self-replicating mechanism allows robust fluorescence at significantly lower RNA doses, reducing cytotoxicity and improving cell viability in sensitive cell types.



High-Sensitivity Assays

Enhanced expression makes saRNA suitable for low-signal environments, enabling reporter readouts in hard-to-transfect cells, primary cells, and stem cells.



Cat#	Product	Package
CR00033	tdTomato Self-Amplifying RNA	100 µg/1 mg

Others

- saRNA-GFP



- saRNA-RFP

