



F22
P001G
1 μ mol

■ Known Property	RNA probe
■ Application	Selective fluorescent imaging of nuclear structure in live cells
■ Target molecule:	RNA
■ Storage	① Delivery: Room Temperature ② Dried compound: 4 °C or -20 °C ③ Compound solution: 4 °C or -20 °C

■ ORDER

	054-279-0000
	SenPro
	name@example.com
	www.senprobe.com

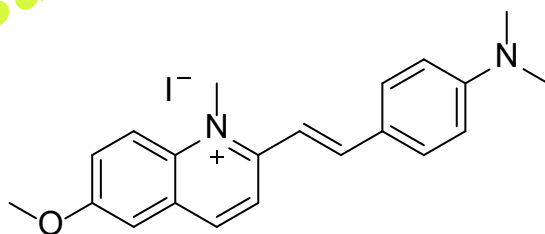
■ General Use Guide

More than 1/100 dilution of 10mM of DMSO stock solution is essential

For biomedical use to avoid DMSO concentration higher than 1%.

Working concentrations for specific applications should be determined by the investigator.

It is recommended to use up the buffer diluted solution within one day. The compound may be decomposed or precipitated out from buffer solution.



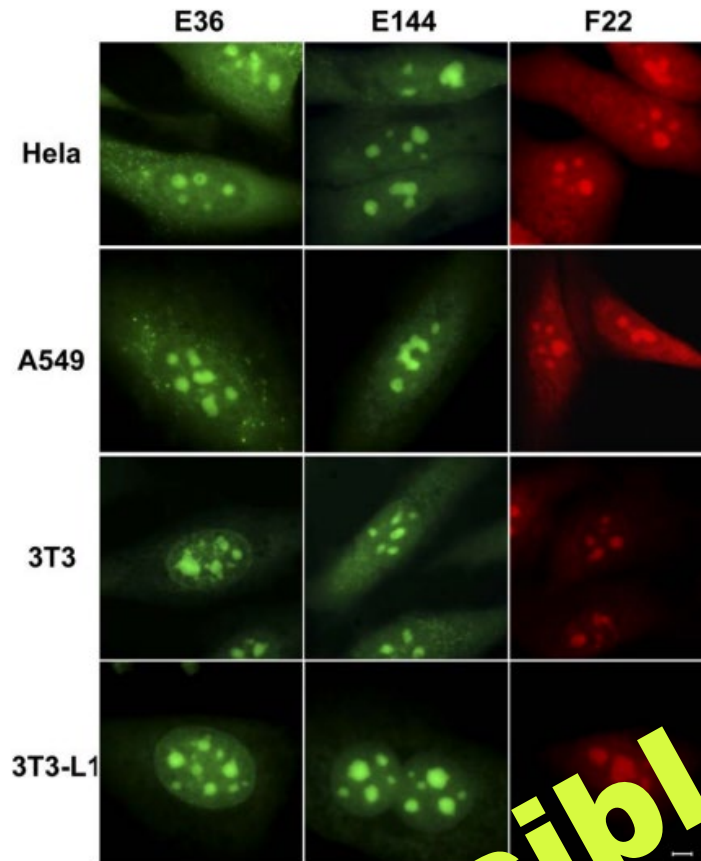
Molecular Weight

446.33 (C₂₁H₂₃IN₂O)

$\lambda_{\text{ex}} / \lambda_{\text{em}}$

492 / 598 nm (in buffer), 548 / 620 nm (with RNA)

F22 is a selective RNA probe over DNA. **F22** was disclosed through in vitro DNA/RNA selectivity screening and live cell staining for nucleolus



Live Cell RNA Staining with Selected Dyes **E36**, **E144**, and **F22** were tested at a 5 μM concentration. The picture of **F22**-stained 3T3 cells was obtained in a 1 μM dye concentration. 1000x magnification was utilized in the imaging. The scale bar represents 5 μm . Image brightness and contrast were slightly adjusted to improve picture quality. **E36**, **E144** (green: FITC channel), and **F22** (red: Cy3 channel) are shown.

- Related probes: E36, F22

Reference

1. **RNA-selective, live cell imaging probes for studying nuclear structure and function.**, Li, Q., Kim, Y. K., Namm, J., Kulkarni, A., Rosania, G., Ahn, Y. H., Chang, Y. T.* *Chem. Biol.* **2006**, *13*, 615-623.
2. **A protocol for preparing, characterizing and using three RNA-specific, live cell imaging probes: E36, E144 and F22** Li, Q.; Chang, Y. T.* *Nat. Protoc.* **2006**, *1*, 2922-2932.
3. **RNA buffers the phase separation behavior of prion-like RNA binding proteins**, Maharana, S.; Wang, J.; Papadopoulos, D. K.; Richter, D.; Pozniakovsky, A.; Poser, I.; Bickle, M.; Rizk, S.; Guillén-Boixet, J.; Franzmann, T.; Jahnel, M.; Marrone, L.; Chang, Y. T.; Sternecker, J.; Tomancak, P.; Hyman, A. A.; Alberti, S. *Science* **2018**, *360*, 918-921.
4. **RNA-Induced Conformational Switching and Clustering of G3BP Drive Stress Granule Assembly by Condensation**, Guillén-Boixet, J.; Kopach, A.; Holehouse, A. S.; Wittmann, S.; Jahnel, M.; Schlüßler, R.; Kim, K.; Trussina, I. R. E. A.; Wang, J.; Mateju, D.; Poser, I.; Maharana, S.; Ruer-Gruß, M.; Richter, D.; Zhang, X.; Chang, Y. T.; Guck, J.; Honigmann, A.; Mahamid, J.; Hyman, A. A.; Pappu, R. V.; Alberti, S.; Franzmann, T. M. *Cell* **2020**, *181*, 346-361.