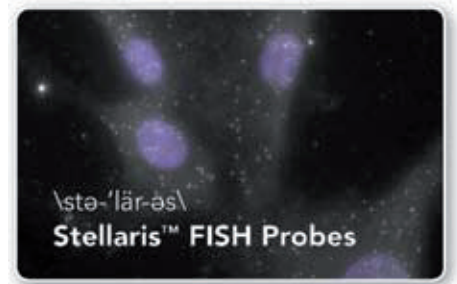


Stellaris[®] FISH Probes

Detect & Quantify Single mRNA Molecules *in situ*

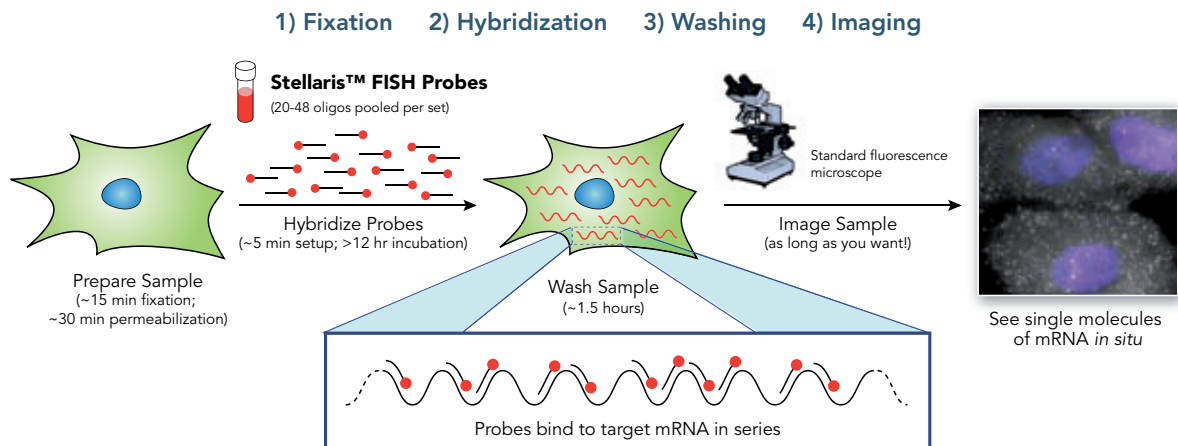
What are Stellaris FISH Probes?

Stellaris FISH Probes are used for single molecule RNA detection by fluorescence *in situ* hybridization (FISH). This much improved and simplified FISH technology brings enough sensitivity to allow you to detect individual molecules of mRNA, and count them. A set of Stellaris FISH probes comprises up to 48 single-labeled oligonucleotide probes that cooperatively bind to targeted transcripts. Use Stellaris FISH Probes for in cell observation of gene expression and RNA localization with simultaneous target quantification. Single molecules can be seen as individual diffraction-limited spots in conventional fluorescence microscopes, evoking stars on a moonless night! For Research Use Only. Not for use in diagnostic procedures.



How to Use Stellaris FISH Probes

The Stellaris RNA FISH Method - Detecting single transcripts *in situ* using Stellaris FISH Probes is remarkably simple and straightforward. Probes bound to the target in fixed cells and imaged by wide-field fluorescence microscopy bring light to your queries. An experiment using Stellaris FISH Probes requires no probe preparation and can detect single mRNA molecules in four easy steps:



Fluorophore	EX (nm)	EM (nm)
CAL Fluor® Orange 560	538	559
Quasar® 570 (Cy@3 Replacement)	548	566
TAMRA	557	583
CAL Fluor® Red 590 (TAMRA Replacement)	569	591
CAL Fluor® Red 610 (Alexa Fluor® 594 Replacement)	590	610
CAL Fluor® Red 635	618	637
Quasar® 670 (Cy@5 Replacement)	647	670

For more details, visit www.biocat.com/stellaris

Reporter Dye Selection

We offer the following fluorophore options for Stellaris FISH Probes, see table. Simply select the fluorophore(s) that best match the filter set(s) of your fluorescence microscope.

Note: All CAL Fluor® and Quasar® dyes are fluorophores proprietary to Biosearch Technologies.

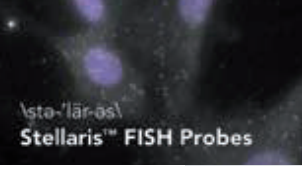
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Stellaris FISH Probes

Free, Online Probe Design

You can quickly design Stellaris FISH Probes possessing optimal binding properties for your target RNA sequence using Biosearch Technologies' free, web-based probe designer: <https://www.biocat.com/stellarisdesigner>

Why Use Stellaris FISH Probes?

Unsurpassed Simplicity and Sensitivity – never before has it been so simple and straightforward to quantify mRNA using FISH. Count single molecules using light microscopy!

Design Specificity and Redundancy – Stellaris FISH probes gain potency through built-in redundancy and cooperative unwinding. Mismatched oligonucleotides or probes that fail to bind, produce negligible background fluorescence while the majority of Stellaris FISH Probes produce bright fluorescence signals from bound target molecules of mRNA.

Applicable to Many Sample Types – From cultured cells to tissue samples, Stellaris FISH Probes are used with a wide variety of biological specimens including, but not limited to, bacteria, yeast, mammalian cells, *Caenorhabditis elegans* embryos and L1-L2 larvae, *Drosophila melanogaster* wing imaginal discs, and primary rat hippocampal neurons.

Multiplexing Capabilities – Detect two or three different species of mRNA target molecules at the same time by using Stellaris FISH Probes of different colors.

Advanced Tool for Research – Stellaris FISH Probes give you the ability to detect single molecules of your target mRNA in situ, giving you the potential to transform research in cancer, stem cell research, neuroscience, developmental biology, pathology, and more.

Stellaris FISH Probe Product Information

Stellaris FISH Probes are a blend of up to 48 oligos labeled with fluorophore. A single tube contains 5 nanomoles total, such that each oligo is represented at about 100 picomoles. This probe stock is sufficient to provide 200 through 2000 hybridization experiments depending on the mRNA abundance and hence the optimal working dilution. Stellaris FISH Probes arrive lyophilized and ready to use.

Custom Stellaris FISH Probes		
Catalog #	Product Description	Delivered Amount
SMF-1001-5	Stellaris® FISH Probes, Custom Assay with TAMRA	5 nmol of pooled oligos
SMF-1063-5	Stellaris® FISH Probes, Custom Assay with Quasar® 570	5 nmol of pooled oligos
SMF-1065-5	Stellaris® FISH Probes, Custom Assay with Quasar® 670	5 nmol of pooled oligos
SMF-1081-5	Stellaris® FISH Probes, Custom Assay with CAL Fluor® Orange 560	5 nmol of pooled oligos
SMF-1082-5	Stellaris® FISH Probes, Custom Assay with CAL Fluor® Red 610	5 nmol of pooled oligos
SMF-1083-5	Stellaris® FISH Probes, Custom Assay with CAL Fluor® Red 590	5 nmol of pooled oligos
SMF-1084-5	Stellaris® FISH Probes, Custom Assay with CAL Fluor® Red 635	5 nmol of pooled oligos

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