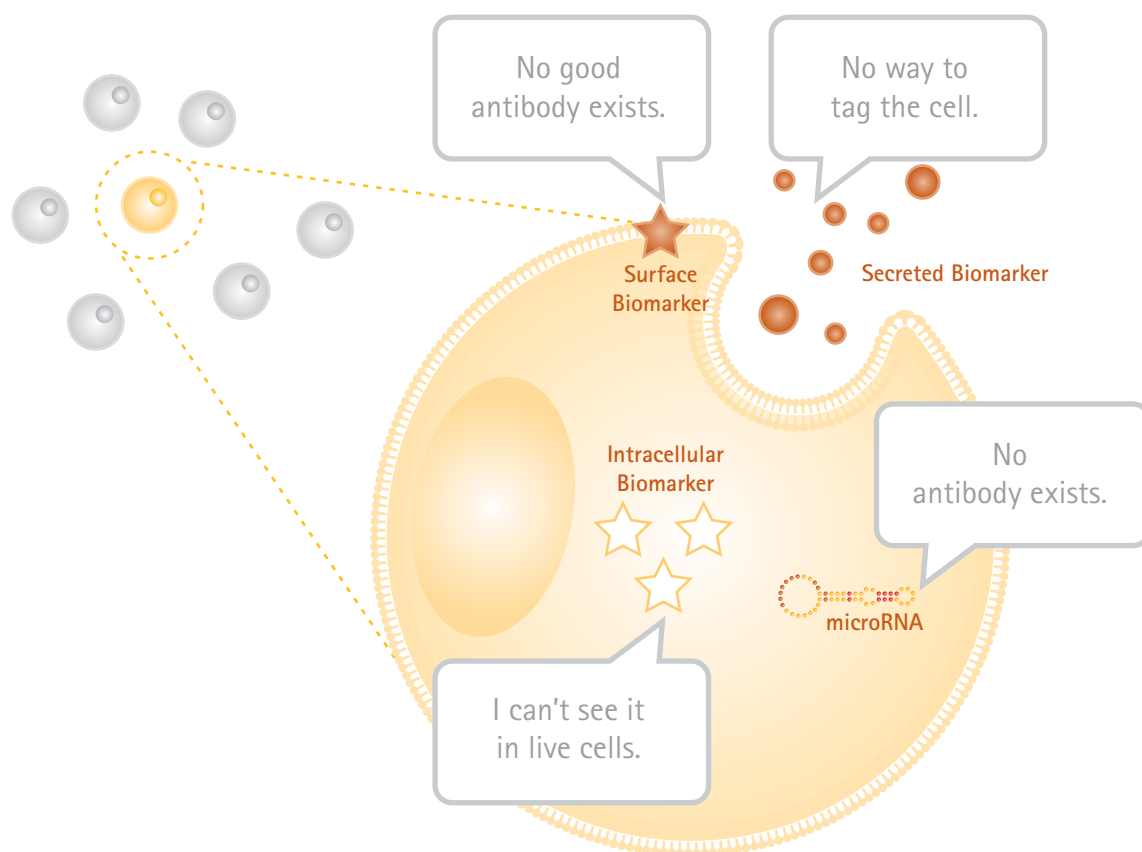


It's what's on the inside that matters. Detect internal biomarkers in live cells.

Need to isolate your live cells but are struggling with any of these problems?



SmartFlare™ Live Cell RNA Detection Reagents can help!

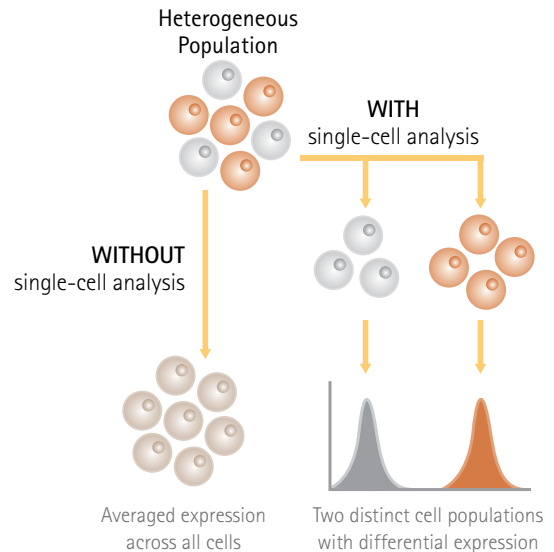
Take single cell analysis to the next level with live cell sorting

The latest research shows increasing significance of single cell analysis. Whether it occurs naturally or is created artificially, heterogeneity can cause unwanted background when trying to study a subpopulation of cells. Live cell sorting allows you to harness the power of single cell analysis to gain a true understanding of your target cell population.

Expand your world of biomarkers and sort what you couldn't sort before.

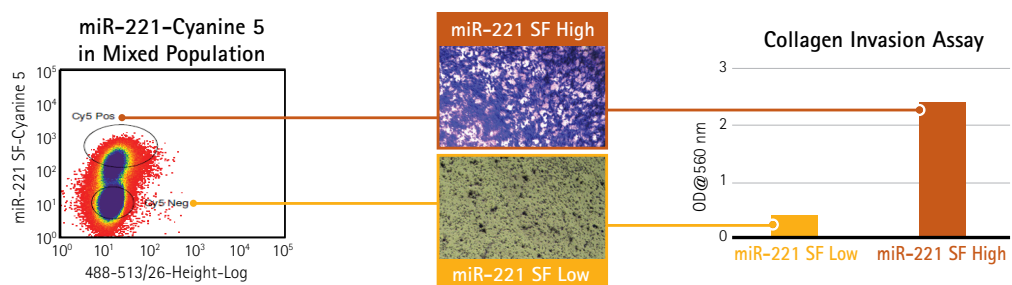
Benefits of SmartFlare™ Probes for live cell sorting:

- No longer limited to surface markers or transfected fluorescent reporters.
- Sort on any gene of interest by using RNA as a new sort parameter.
- No toxicity or affect on gene expression.
- Re-culture your sorted cells for further experiments.



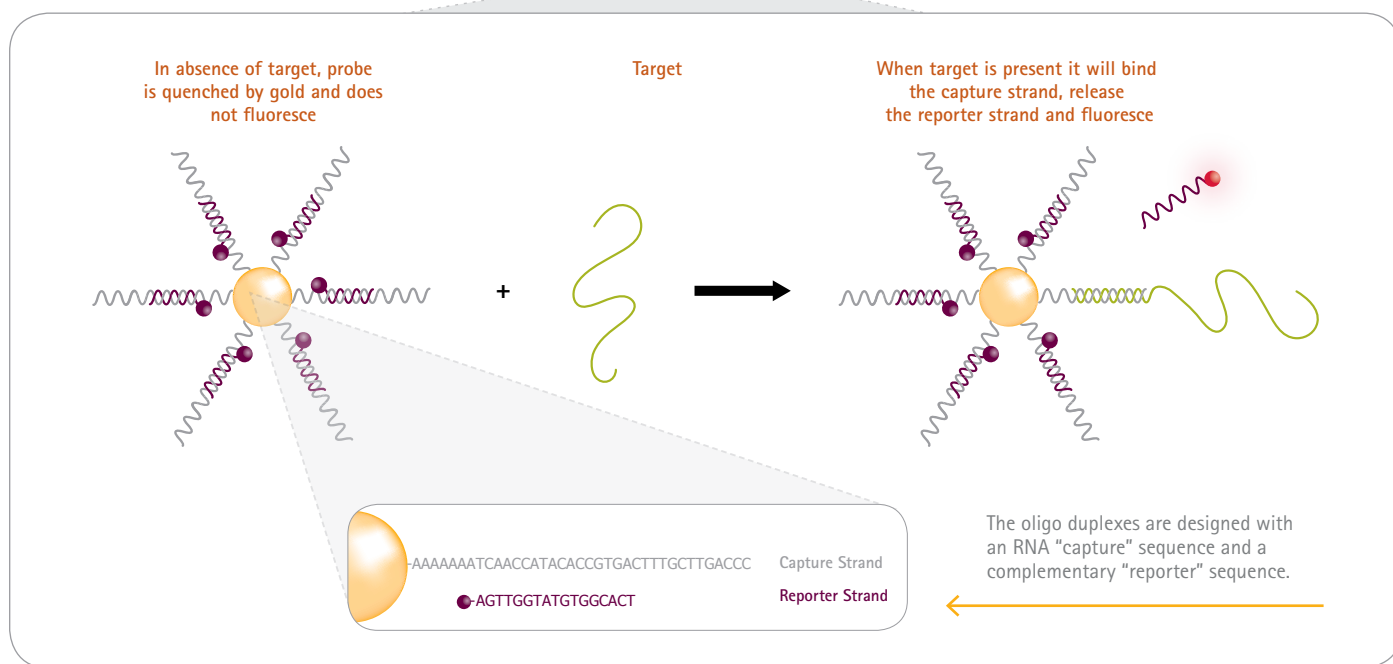
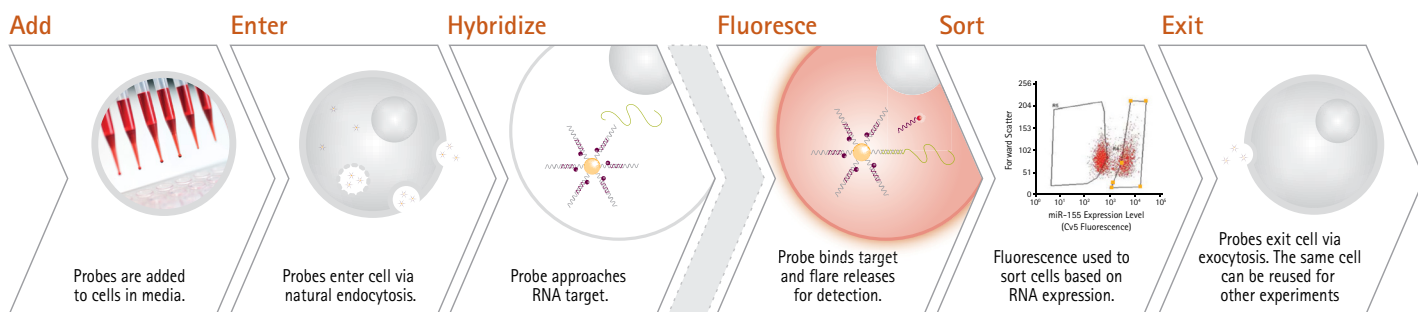
Sorting can help when you have...		The cells are still alive and ready for downstream assays. What will you do next?
Tumor Cell Heterogeneity Stem Cell Differentiation Cellular Reprogramming Normal Cell Heterogeneity siRNA knockdown Gene Expression Heterogeneity		Western Blot Immunocytochemistry RT-PCR Next-gen Sequencing Functional Assays Drug Treatments And more...

You can even sort on microRNAs...



Cyanine 5 positive cells ("miR-221- high") and Cyanine 5 negative cells ("miR-221-low") were sorted (A) and analyzed using a transwell collagen invasion assay. Cells that invaded through to the underside of the transwell membrane were stained and either visualized (B) or the stain was extracted and absorbance measured (C).

All of these capabilities only require a simple addition to cell culture and a single incubation step.



Enter, bind, fluoresce, exit. SmartFlare™ probes enter the cell using the cell's own endocytosis process. The probes circulate within the cell and bind to the complementary RNA sequence. This binding event releases a fluorophore, illuminating the cells for detection. Over time, the probe exits the cell, leaving the cell unchanged and free for downstream analyses.

Cell lines with known compatibility

2102Ep	Hu MSC ES derived	SCC25	AGS	Daudi	Hu Astrocytes	MDA-MB-435	Rat Astrocytes	THP-1
A431	Hu skeletal muscle	SK-MEL-28	BT474	F9	Hu Chondrocytes	Ms Astrocytes	RAW 264.7	U373MG
ARPE-19	MC3T3-E1 Cl 4	SK-N-SH	BxPC-3	HDF	Hu Schwann	Mouse NSC	RIN-m5F	U87MG
HCC1806	MCF10-2A	U251	C33 a	Hec-1-A	HUVEC	NCI-H510A	RT4	UMR-106
HCN1A	MDA-MB-231	WEHI-3	CAKI-2	Hepa1c1c7	INS-1	NCI-H69	SK-N-AS	WI-38
Hs578t	PC-3	10T 1/2	Capan1	Hepa1-6	Jurkat	NCI-N87	SU-DHL-1	H9 Human ES
HT1080	RT4-D6P2T	A172	CCF-STTG1	HL-60	LNCaP	NIH/Ovcar3	T47D	iPS
Hu cardiac myocytes	Saos-2	A549	Daoy	HT29	MCF-7	PANC-1	T98G	

Find out what you can sort with today!

We have over 1,500 SmartFlare™ Probes in our catalog across multiple research areas, especially Cancer and Stem cells. If we do not have your target in the catalog, we can make a custom SmartFlare™ Probe for you!

See a list of available probes at: www.emdmillipore.com/smartflare

Don't just take our word for it....

SmartFlare™ Probes have been used for all sorts of Sorts.

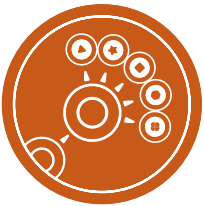
SmartFlare™ probes are versatile reagents to improve live single cell research across multiple applications. Whether sorting out cancer stem cells from primary tumors, identifying subpopulations secreting biomarkers, or enriching after cellular reprogramming, researchers are showing all sorts of ways to use SmartFlare™ Probes. What will you uncover in your own research?



Sorting on Secreted Markers

Seftor et al. Seminars in Oncology, Pubmed ID: 24787297

SmartFlare™ Probes used to sort live melanoma cell populations based on differential expression of Nodal, a secreted marker.



Sorting Based on Stem Cell Markers

Lahm et al. Stem Cells, Pubmed ID: 25335772

SmartFlare™ Probes used to sort live Nanog positive cells. Sorted populations with higher Nanog signal showed a greater potential for differentiation into cells of all three germ layers.

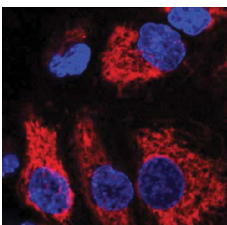


Sorting Cancer Stem Cells from Primary Tumors

Steve McClellan, Nature Webinar, 2013

SmartFlare™ Probes used to sort live cancer stem cells from a variety of tumor types based on Nanog positive signal. The resulting sort products were characterized and shown to be still tumorigenic.

Interested in live cell imaging?
SmartFlare™ Probes can do that too!



Live cell imaging of miR-21 RNA in human prostate cancer cells (DU145) using SmartFlare™ RNA Detection Probes

Ready to take the next step in live cell analysis?
Check out our guide for first time users on our website.

www.emdmillipore.com/smartflare



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