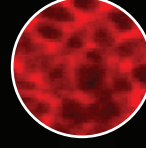
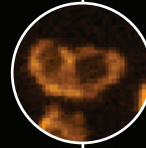
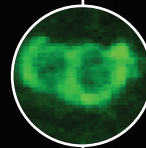
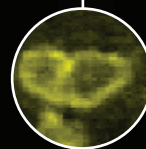
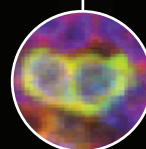
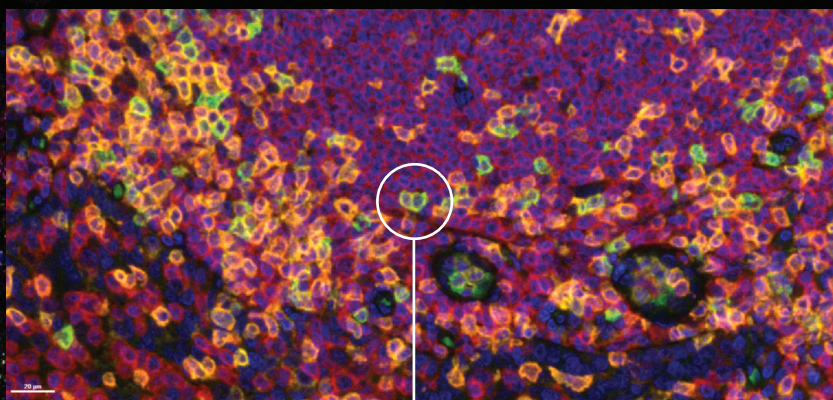


Welcome To Opal

Unlock the Power of Spatial Biology



**Detecting
Multiple Markers
of Interest on the
Same Cell**

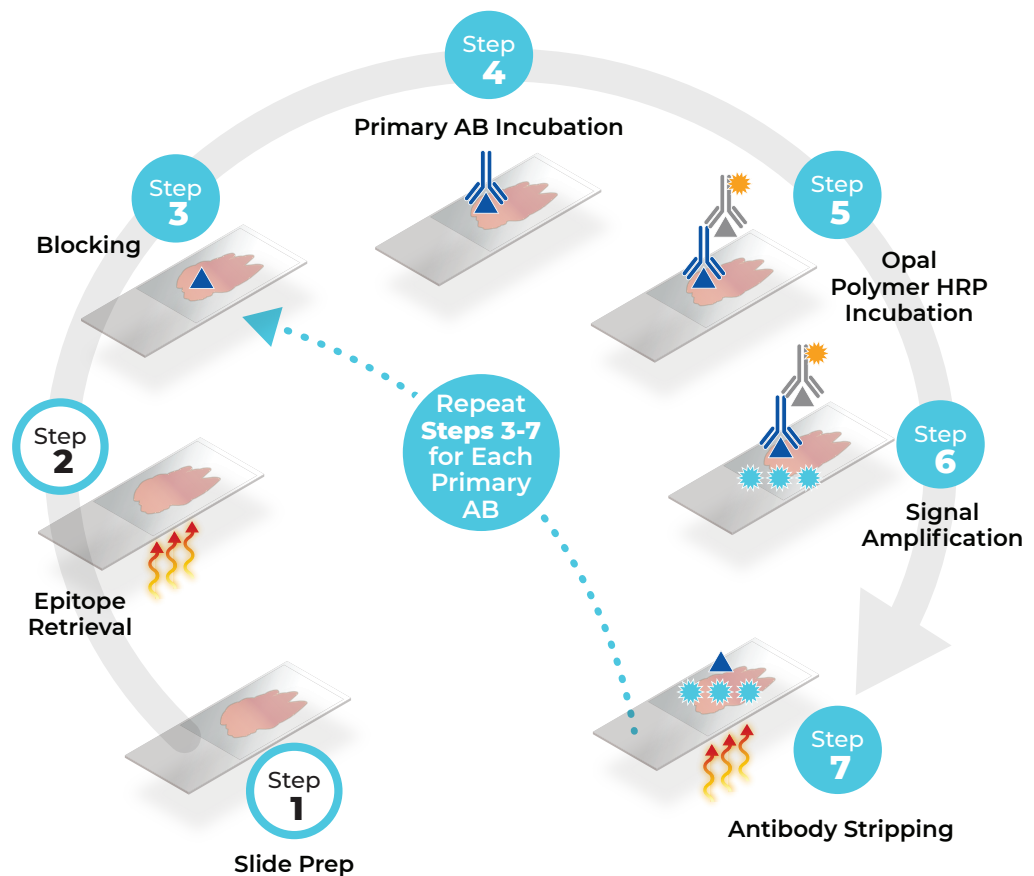


Welcome
To Opal

What is Opal?

Opal™ is a method for multiplex fluorescent immunohistochemistry in formalin-fixed, paraffin-embedded (FFPE) tissue that can be performed manually or via automation. It allows the use of standard unlabeled primary antibodies, including multiple antibodies raised in the same species. The method involves detection with Opal reactive fluorophores that covalently label the epitope. After labeling is complete, antibodies are removed in a manner that does not disrupt the Opal fluorescence signal. This allows the next target to be detected without fear of antibody cross-reactivity. Opal enables the development of multiplexed assays with balanced, quantitative signal for rare and abundant targets, imaged in a single final scan with the Akoya portfolio of multi-spectral imagers, including the **Vectra Polaris**.

Iterative Staining Diagram for Opal Multiplex IHC Assays



Opal Multiplex assays are based on traditional IHC staining workflows.



Welcome
To Opal

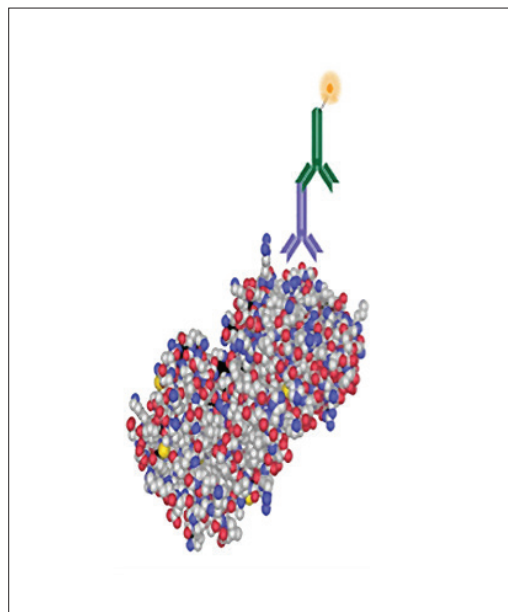
Opal Enables You To...

- Use the best primary antibodies, regardless of species – with no cross-reactivity
- Identify multiple cell phenotypes while retaining spatial and morphological context that is lost with bulk measurements and flow cytometry
- Get more information from precious and scarce samples
- Image once, without coverslip removal

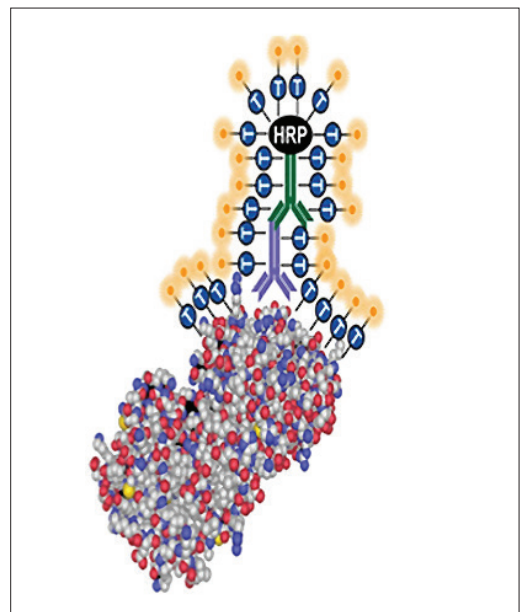
Opal Uses Tyramide Signal Amplification (TSA) as Part of the Multiplexing Workflow to:

- Improve sensitivity by 10 to 100-fold
- Achieve excellent resolution with low background
- Higher dynamic range (up to 4 logs) compared to chromogenic (up to 1 log)
- Reduce antibody consumption
- Better correlation between protein expression and signal intensity (better quantification, e.g. phenotypic scoring)
- Increase plexing for multiple biomarker detection strategies
- Add signal amplification to almost any immunoassay

Standard Detection



TSA Detection



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more about
in-person and
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Academy
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OPAL MOTIF KITS

Opal™ MOTiF™ Antibody Panel Kits are pre-optimized, ready-to-use primary and secondary antibody panels designed for use with the Leica BOND RX and Vectra Polaris systems.

Opal MOTiF Kits		
Name	Size	Part #
MOTiF™ PD-1/PD-L1 Panel: Pan I/O Kit	50 slides	OP-000001
MOTiF™ PD-1/PD-L1 Panel: Auto Melanoma Kit	50 slides	OP-000003

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OPAL MANUAL MULTIPLEX IHC DETECTION KITS

Opal™ kits come complete with all your necessary secondary antibodies and detection reagents for use on Akoya imaging platforms.

Opal Kits & Reagents		
Name	Size	Part #
Opal Polaris 7 Color Manual IHC Detection Kit	50 slides	NEL861001KT
Opal 7-Color Manual IHC Kit	50 slides	NEL811001KT
Opal 4-Color Manual IHC Kit	50 slides	NEL810001KT
Opal 7 Solid Tumor Immunology Kit	50 slides	OP7TL4001KT
Opal 7 Tumor Infiltrating Lymphocyte Kit	50 slides	OP7TL3001KT
Opal 7 Immunology Discovery Kit	50 slides	OP7DS2001KT
Opal 4 Lymphocyte Kit	50 slides	OP4LY2001KT
Opal 4-Color Anti-Rabbit Manual IHC Kit	50 slides	NEL840001KT

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OPAL AUTOMATION MULTIPLEX IHC DETECTION KITS

With our Opal Automation IHC kits you can perform Opal multiplex staining on one of the leading research automated staining platforms – the BOND RX™ by Leica Biosystems. Automation provides you with the flexibility to support the dynamic demands of translational research.

Opal Kits & Reagents		
Name	Size	Part #
Opal Polaris 7 Color Automation IHC Detection Kit	50 slides	NEL871001KT
Opal 7-Color Automation IHC Kit	50 slides	NEL821001KT
Opal 4-Color Automation IHC Kit	50 slides	NEL820001KT
Opal 4-Color Anti-Rabbit Automation IHC Kit	50 slides	NEL830001K

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Additional Resources

Please visit www.akoyabio.com/support for additional resources, including FAQs and publications.

Opal, as part of the Phenoptics solution from Akoya Biosciences, is the most flexible and dynamic workflow to interrogate the spatial relationships between different phenotypes within the context of the tissue microenvironment.

For more information on the Opal methodology and workflow, please visit our [website](#) to view support resources, including our new Opal Assay Development Guide and **Opal Quick Start Tool**, an interactive form with guidance based on published data from top researchers using Opal as their spatial biology platform.

Reach out to us at customercare@akoyabio.com with any questions or to request a quote today.