

Multiplex Immunohistochemistry Kit (3-color TSA)

Catalog# / Size	426503 / 90 tests 426504 / 250 tests
Regulatory Status	RUO
Other Names	Multiplex IHC Kit, Multiplex IHC TSA Amplification Kit, StreptaClick HRP
Description	BioLegend's Multiplex Immunohistochemistry Kit (3-color TSA) provides a powerful method for multiplex Tyramide Signal Amplification (TSA) on frozen or formalin-fixed paraffin embedded (FFPE) tissues. This kit uses click reaction to attach StreptaClick®-HRP, a monovalent horseradish peroxidase (HRP), to your biotinylated antibody of choice. The HRP-labeled biotinylated antibodies can then be used for multiple cycles of immunostainings where each fluorochrome is sequentially developed by TSA. This kit utilizes a novel HRP Block Buffer that efficiently quenches HRP activity between staining cycles without the need for heat treatment. This results in a faster and streamlined protocol for multiplex immunostaining experiments with reliable results. StreptaClick®-HRP is compatible with biotinylated antibodies from any host and on tissues from mice, humans, rats, and other species. The kit includes 3 Tyramide dyes: Tyramide 488, Tyramide 555, and Tyramide 647. Click here to view BioLegend's biotin-labeled antibodies which are verified for use in immunohistochemistry.

Product Details

Verified Reactivity	Species independent
Preparation	Please refer to the detailed protocol in the Related Protocols section.
Storage & Handling	<u>Kit Contents (90/250 tests)</u> 3% H₂O₂ (150/300 µL) - Store at 4°C Biotin Block Buffer (300/600 µL) - Store at 4°C HRP Block Buffer (9/25 mL) - Store at 4°C Block Activator (1450/1450 µL) - Store at 4°C StreptaClick®-HRP (170/500 µL) - Store at 4°C TSA Amplification Buffer Plus (25 mL) - Store at 4°C 30% H₂O₂ (100 µL) - Store at 4°C Tyramide 488 (80 µg) - Store at -20°C Tyramide 555 (80 µg) - Store at -20°C Tyramide 647 (80 µg) - Store at -20°C
Application	<u>IHC-F - Quality tested</u> <u>IHC-P - Verified</u>
Recommended Usage	Please see the detailed protocol below in the Related Protocols section.
Application Notes	This kit can be used for multiplex immunohistochemistry using Tyramide Signal Amplification (TSA) on <u>frozen</u> or <u>formalin-fixed paraffin embedded (FFPE)</u> tissue sections. The protocol does not use heat treatment between cycles, which also allows TSA multiplex immunostaining on frozen tissue sections. This kit uses click reaction to attach monovalent horseradish peroxidase (HRP) to your biotinylated antibody of choice. The HRP-labeled biotinylated antibodies can then be used for multiple cycles of immunostainings where each fluorochrome is sequentially developed by TSA. The kit contains an HRP Block Buffer optimized for preserving the morphology of frozen tissue sections. The HRP block buffer rapidly quenches the HRP enzyme after each TSA cycle and allows for sequential multiplex IHC. Please see the detailed protocol below: https://www.biolegend.com/en-us/protocols/multiplex-immunohistochemistry-kit-3-color-tsa-protocol Click here to view BioLegend's biotin-labeled antibodies which are verified for use in immunohistochemistry.

Additional Product Notes

Name	Absoption Max	Emission Max
Tyramide 488	494 nm	517 nm
Tyramide 555	555 nm	572 nm
Tyramide 647	649 nm	671 nm

Tyramide Dyes:
Fluorescence tyramide dyes enable tyramide signal amplification (TSA), delivering exceptional signal strength for immunohistochemistry (IHC), immunocytochemistry (ICC), and fluorescence in situ hybridization (FISH) applications.

How TSA Works:
TSA leverages horseradish peroxidase (HRP) chemistry to achieve dramatic signal enhancement. In the presence of hydrogen peroxide, HRP catalyzes the conversion of tyramide-containing dyes into highly reactive free radicals. These activated molecules covalently bind to tyrosine residues at or near the HRP location, creating permanent, amplified signals directly at your target site.

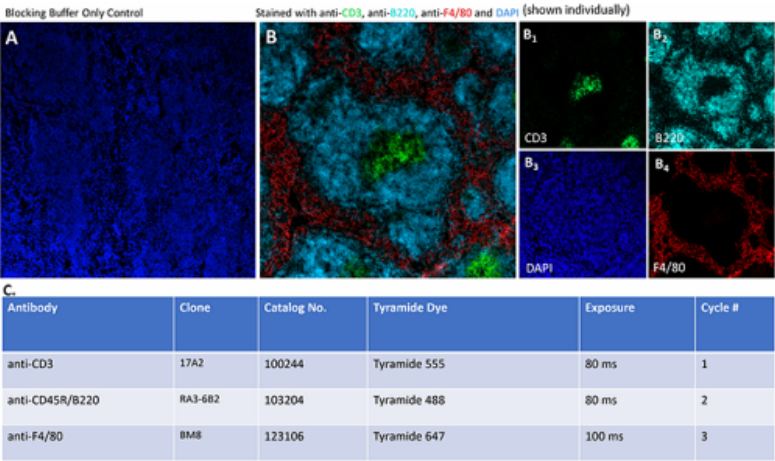
Antigen Details

Gene ID NA

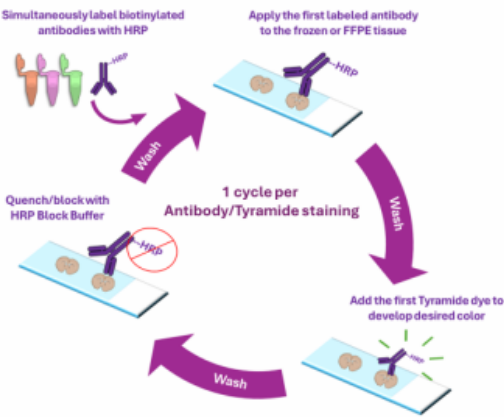
Related Protocols

- [Multiplex Immunohistochemistry Kit \(3-color TSA\) Protocol](#)

Product Data



Multiplex immunostaining staining on frozen spleen tissue from C57BL/6 mice. First, the tissue sections were fixed with 4% paraformaldehyde for 10 minutes and blocked. Then, the tissue was stained with the Multiplex Immunohistochemistry Kit (3-color TSA) along with 3 biotinylated antibodies (panel B) or buffer only (negative control, panel A). Nuclei were counterstained with DAPI (Cat. No. 422801) (blue) and images were merged (panels A and B). The image was captured using a 10X objective. The tyramide dye and antibody combinations, exposure times and cycle number are noted in panel C.



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