Glowing products for science

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TyraMax™ Amplification Dyes and Kits



Biotium's next-generation tyramide dyes with the widest selection of bright, photostable, and chemically stable dyes for spatial biology.

Test how it performs with a free 20 uL sample of any TyraMax™ Amplification Dye, limited time only!

Request Free Sample

Product attributes

Functional group	Tyramide
Chemical reactivity (reacts with)	Tyrosine residues
Assay type/options	Tissue staining
Detection method/readout	Fluorescence microscopy
Storage Conditions	Store at 2 to 8 °C, Protect from light

Product Description

TyraMax™ Dyes are Biotium's next generation of tyramide amplification dyes for spatial biology. The dyes have been designed to yield a brighter signal compared to our original CF® Dye tyramides, and have advantages in brightness, photostability, and working solution stability compared to other TSA dyes.

Features

- Largest selection of tyramide colors available, with unique options from blue to near-IR
- Stable in amplification buffer for at least 24 hours, including near-IR dyes
- Advantages in brightness and/or photostability compared to other TSA dyes
- Available as standalone dyes with trial sizes, and dye sets for multiplexing or panel development

Power Your Multiplex Panels with TyraMax™

Tyramide signal amplification (TSA), also known as Catalyzed Reporter Deposition (CARD), is a highly sensitive technique for detecting low-abundance targets in fluorescent immunocytochemistry (ICC), immunohistochemistry (IHC), and in situ hybridization (FISH). The superior sensitivity of TSA and its compatibility with multiplexing by cyclic immunofluorescence (CycIF) has made it indispensable for spatial biology applications.

TyraMax™ Dyes were developed as high-performance TSA dyes, offering brighter, more photostable signals than Aluora® and Opal® reagents. They also remain stable in amplification buffer for up to 24 hours, facilitating automated staining workflows. For optimal results, Biotium recommends using Tyramide Amplification Buffer Plus (Cat. No. 22029) with TyraMax™ Amplification Dyes.

Widest Selection of Colors for Unrivaled Panel Flexibility

Ideal for Multiplex Imaging and CycIF Workflows

Superior Brightness Compared to Other TSA Reagents

Signal Stability You Can Count On

TyraMax™ Amplification Dyes are available with a wide choice of dye options for multiplexing by conventional or spectral imaging. TyraMax™ Dyes are offered as standalone dye solutions, as 3-color or 5-color dye sets plus DAPI counterstain, and in a sampler for custom panel optimization. See the tables below for a full list of TyraMax™ Dyes, kits, and recommended channels.

TyraMax™ Amplification Dyes

Dye	Abs/Em (nm)	Laser Line	Detection channel	Dye Features	Size	Catalog No.
TyraMax™ 410/450	408/452	405 nm	DAPI/Alexa Fluor® 405	Unique tyramide color, spectrally similar to Alexa Fluor® 405	20 uL	96134-20UL
100 uL	96134-100UL					
TyraMax™ 430/500	421/497	405 nm	FITC	Brighter than Aluora® 430 and Opal® 480	20 uL	96135-20UL
100 uL	96135-100UL					
TyraMax™ 400/550	394/547	405 nm	FITC	Unique tyramide color, spectrally similar to Pacific Orange®	20 uL	96136-20UL
100 uL	96136-100UL					
TyraMax™ 490/520	497/518	488 nm	FITC	Brighter than Opal® 520, replacement for Aluora® 488	20 uL	96137-20UL
100 uL	96137-100UL					
TyraMax™ 555/565	552/569	555 nm or 561 nm	TRITC	Brighter than Opal® 570, replacement for Aluora® 555	20 uL	96138-20UL
100 uL	96138-100UL					
TyraMax™ 560/580	562/584	555 nm or 561 nm	TRITC	Alternative to Aluora® 555, Opal® 570 with superior photostability	20 uL	96139-20UL
100 uL	96139-100UL					
TyraMax™ 630/650	631/650	633 nm or 640 nm	Cy®5	Bright and photostable alternative to Aluora® 647, Opal® 650	20 uL	96140-20UL
100 uL	96140-100UL					
TyraMax™ 647/670	650/670	633 nm or 640 nm	Cy®5	Brighter than Opal® 650, replacement for Aluora® 647	20 uL	96141-20UL
100 uL	96141-100UL					
TyraMax™ 660/680	663/683	633 nm or 640 nm	Alexa Fluor® 680	Unique tyramide color, spectrally similar to Alexa Fluor® 660. Brighter and more photostable Opal® 690 when excited at 640 nm	20 uL	96142-20UL
100 uL	96142-100UL					
TyraMax™ 680/700	680/701	685 nm (detectable with 640 nm excitation)	Alexa Fluor® 680	Brighter and more photostable than Opal® 690 when excited at 685 nm	20 uL	96143-20UL
100 uL	96143-100UL					
TyraMax™ 710/740	711/736	685 nm	Alexa Fluor® 700	Brighter and more photostable than Aluora® 700	20 uL	96144-20UL
100 uL	96144-100UL					
TyraMax™ 740/770	742/768	730 nm	Alexa Fluor® 750	Single-step detection, unlike Opal® 780. Stable in amplification buffer for up to 24 hours, unlike Aluora® 750	20 uL	96145-20UL
100 uL	96145-100UL					

TyraMax™ 3-Plex Amplification Dye Set with DAPI (Cat. No. 33029)

Component #	Component Name	Size
96137-100UL	TyraMax™ 490/520 Amplification Dye, 100X, 100 uL	For 100 samples using 100 uL staining volume

Component #	Component Name	Size
96139-100UL	TyraMax™ 560/580 Amplification Dye, 100X, 100 uL	
96140-100UL	TyraMax™ 630/650 Amplification Dye, 100X, 100 uL	
99897-50UL	DAPI, 1000X, 50 uL	

TyraMax™ 5-Plex Amplification Dye Set with DAPI (Cat. No. 33030)

Component #	Component Name	Size
96137-100UL	TyraMax™ 490/520 Amplification Dye, 100X, 100 uL	For 100 samples using 100 uL staining volume
96139-100UL	TyraMax™ 560/580 Amplification Dye, 100X, 100 uL	
96140-100UL	TyraMax™ 630/650 Amplification Dye, 100X, 100 uL	
96143-100UL	TyraMax™ 680/700 Amplification Dye, 100X, 100 uL	
96145-100UL	TyraMax™ 740/770 Amplification Dye, 100X, 100 uL	
99897-50UL	DAPI, 1000X, 50 uL	

TyraMax™ Amplification Dye Spectral Sampler (Cat. No. 33031)

Component #	Component Name	Size
96134-20UL	TyraMax™ 410/450	For 20 samples per vial using 100 uL staining volume
96135-20UL	TyraMax™ 430/500	
96136-20UL	TyraMax™ 400/550	
96137-20UL	TyraMax™ 490/520	
96138-20UL	TyraMax™ 555/565	
96139-20UL	TyraMax™ 560/580	
96140-20UL	TyraMax™ 630/650	
96141-20UL	TyraMax™ 647/670	
96142-20UL	TyraMax™ 660/680	
96143-20UL	TyraMax™ 680/700	
96144-20UL	TyraMax™ 710/740	
96145-20UL	TyraMax™ 740/770	

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