



TMB SUBSTRATE KIT, PEROXIDASE (HRP), (3,3', 5,5'-TETRAMETHYLBENZIDINE)

SKU: SK-4400



DESCRIPTION

TMB (3,3', 5,5' tetramethylbenzidine dihydrochloride) is a sensitive chromogen substrate for peroxidase and a non-carcinogenic substitute for benzidine. TMB can be used for blotting, immunohistochemical, and *in situ* hybridization applications. Slides stained with TMB can be dehydrated and permanently mounted and the soluble blue product, produced in the absence of the stabilizing solution, is useful for ELISA assays.

The TMB HRP Substrate Kit (SK-4400) contains the reagents needed to produce either a precipitating blue reaction product or a soluble blue reaction product. This kit also contains a stabilizing solution which, when added to the working solution, allows the development of a blue precipitate. Kit materials are pre-packaged in convenient dropper bottles.

Features:

- Greater sensitivity than conventional substrates

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- Stock solutions supplied in convenient dropper bottles promoting ease of handling
- No wait times for mixing and dissolving powders or tablets
- Sufficient reagents to produce 300 ml of working solution

SPECIFICATIONS

Chromogen Color	Blue
Detection Enzyme	Peroxidase
Microscopy	Brightfield, Spectral Imaging
Mounting Medium Type	Non-Aqueous (Permanent)
Unit Size	1 Kit
Applications	Immunohistochemistry / Immunocytochemistry, In situ hybridization, Blotting Applications, Elispot, ELISAs
Safety Title	WARNING: Cancer – www.P65Warnings.ca.gov
Substrate Reaction Product	Precipitating Reaction Product

KIT COMPONENTS

- 6 ml TMB Reagent 1
- 6 ml TMB Reagent 2
- 6 ml TMB Reagent 3
- 6 ml TMB Reagent 4

TECHNICAL INFORMATION

TMB (3,3', 5,5' tetramethylbenzidine dihydrochloride) is a sensitive chromogen substrate for peroxidase and a non-carcinogenic substitute for benzidine. TMB can be used for blotting, immunohistochemical, and *in situ* hybridization applications. Slides stained with TMB can be dehydrated and permanently mounted and the soluble blue product, produced in the absence of the stabilizing solution, is useful for ELISA assays.

Counterstain / Substrate Compatibility

This table is designed as a reference to determine the optimal counterstain / substrate combination for your application. Consideration should be given to tissue type, antigen

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unmasking protocol, and other detection parameters to achieve the desired staining intensity.

Substrate	Catalog Number	Hematoxylin (H-3404) Hematoxylin QS (H-3401)	Methyl Green (H-3402)	Nuclear Fast Red (H-3404)
ImmPACT DAB (brown)	SK-4105	Excellent Contrast	Excellent Contrast	Fair Contrast
ImmPACT DAB EqV (brown)	SK-4103	Excellent Contrast	Excellent Contrast	Fair Contrast
DAB (brown)	SK-4100	Excellent Contrast	Excellent Contrast	Fair Contrast
DAB-Ni (gray-black)	SK-4100	Excellent Contrast	Fair Contrast*	Good Contrast
ImmPACT AEC (red)	SK-4205	Excellent Contrast	Counterstain Incompatibility**	Color Incompatibility
ImmPACT AMEC Red (red)	SK-4285	Excellent Contrast	Counterstain Incompatibility**	Color Incompatibility
AEC (red)	SK-4200	Excellent Contrast	Counterstain Incompatibility**	Color Incompatibility
TMB (blue)	SK-4400	Color Incompatibility	Counterstain Incompatibility	Excellent Contrast
ImmPACT VIP (purple)	SK-4605	Fair Contrast	Excellent Contrast	Poor Contrast
Vector VIP (purple)	SK-4600	Fair Contrast	Excellent Contrast	Poor Contrast
ImmPACT SG (blue-gray)	SK-4705	Poor Contrast	Good Contrast	Excellent Contrast
SG (blue-gray)	SK-4700	Poor Contrast	Good Contrast	Excellent Contrast
ImmPACT NovaRED (red)	SK-4805	Excellent Contrast	Excellent Contrast***	Color Incompatibility
Vector NovaRED (red)	SK-4800	Excellent Contrast	Excellent Contrast***	Color Incompatibility
ImmPACT Vector Red (magenta)	SK-5105	Excellent Contrast	Excellent Contrast	Color Incompatibility
Vector Red (magenta)	SK-5100	Excellent Contrast	Excellent Contrast	Color Incompatibility

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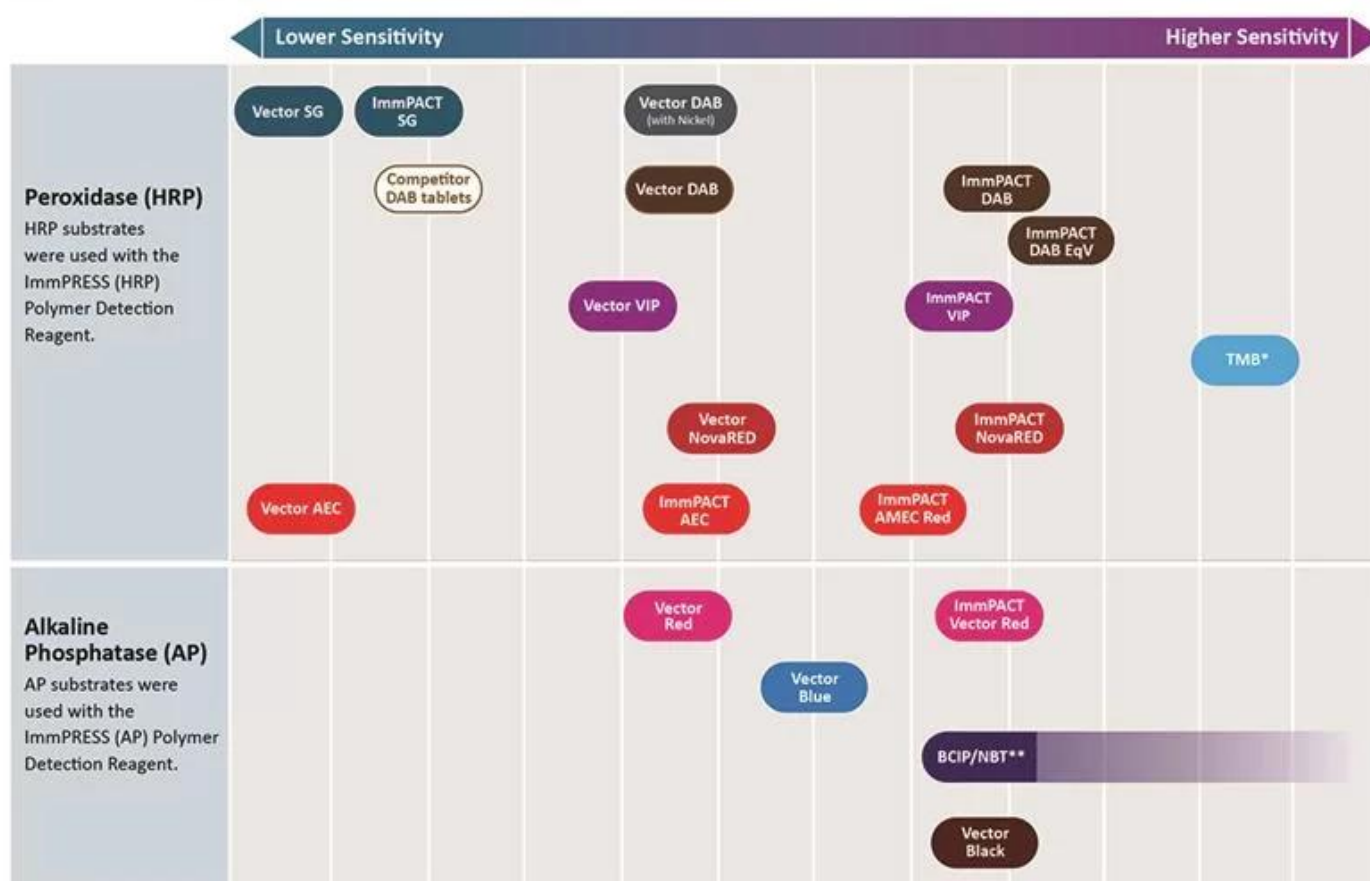
Vector Black (black)	SK-5200	Excellent Contrast	Excellent Contrast*	Excellent Contrast
Vector Blue (blue)	SK-5300	Color Incompatibility	Good Contrast	Excellent Contrast
BCIP / NBT (indigo)	SK-5400	Color Incompatibility	Excellent Contrast*	Excellent Contrast

*This substrate shows a slight decrease in sensitivity following the methyl green protocol. This decrease can be minimized by reducing the heat incubation and acetone rinse times.

**Substrate dissolves in acetone wash.

***A slight color change in ImmPACT NovaRED and Vector NovaRED reaction product may be seen using methyl green.

Relative Sensitivity of Substrates in Immunohistochemistry



* Reaction product deposition not discreet or reliable for IHC. **Longer incubation times increase sensitivity.

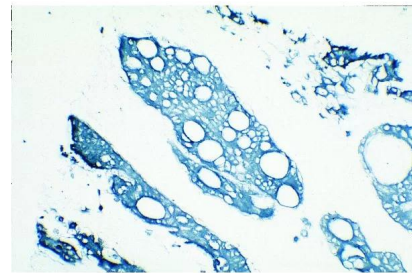
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DOCUMENTS

- [Safety Data Sheet](#)
- [Enzyme Substrates Brochure](#)
- [Enzyme Substrate Combinations Chart](#)
- [Counterstain/Substrate Compatibility Chart](#)
- [User Guide](#)
- [Download CoA](#)
- [Datasheet](#)

GALLERY IMAGES



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