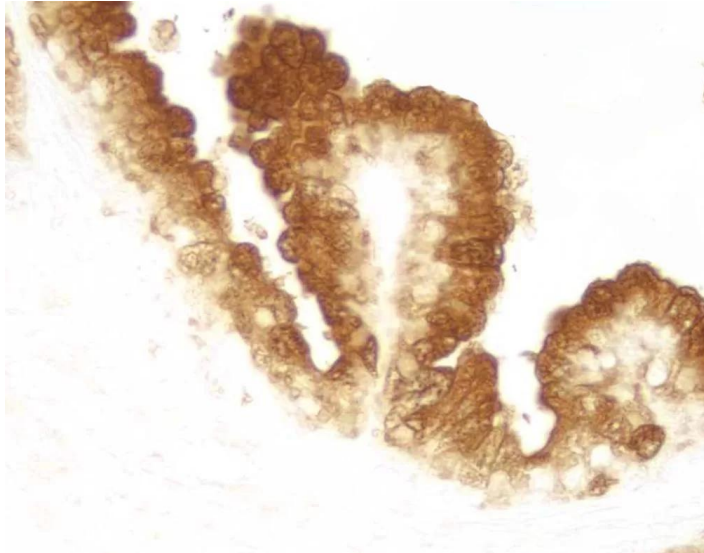




## **DAB SUBSTRATE KIT, PEROXIDASE (HRP), WITH NICKEL, (3,3'-DIAMINOBENZIDINE)**

**SKU:** SK-4100



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### **DESCRIPTION**

This kit contains all of the reagents necessary to prepare either a DAB or a DAB/nickel substrate working solution. Vector DAB Substrate (3,3'-diaminobenzidine) produces a brown reaction product in the presence of peroxidase (HRP) enzyme. This kit also includes nickel chloride, which, when added to the substrate working solution, results in a gray-black reaction product. Vector DAB Substrate is suitable for darkfield and electron microscopy (EM).

Features of this kit:

- Ideal for IHC/ICC/ISH and blots
- Heat Stable
- Permanent mounting
- Ideal for single and multiple labeling
- No wait times for mixing and dissolving powders or tablets

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- Sufficient reagents to produce 300 ml of working solution

## SPECIFICATIONS

|                                        |                                                                                                   |
|----------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Chromogen Color</b>                 | Brown, Gray-Black                                                                                 |
| <b>Detection Enzyme</b>                | Peroxidase                                                                                        |
| <b>Microscopy</b>                      | Brightfield, Darkfield, Electron, Spectral Imaging                                                |
| <b>Mounting Medium Type</b>            | Aqueous (Hardening), Non-Aqueous (Permanent)                                                      |
| <b>Unit Size</b>                       | 1 Kit                                                                                             |
| <b>Applications</b>                    | Immunohistochemistry / Immunocytochemistry, In situ hybridization, Blotting Applications, Elispot |
| <b>Additional Substrate Properties</b> | Heat Resistant, Multiple Labeling                                                                 |
| <b>Safety Title</b>                    | WARNING: Cancer – <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>              |
| <b>Substrate Reaction Product</b>      | Precipitating Reaction Product                                                                    |

## KIT COMPONENTS

- 6 ml DAB Reagent 1
- 6 ml DAB Reagent 2
- 6 ml DAB Reagent 3
- 6 ml DAB Reagent 4 (Nickel Optional)

## TECHNICAL INFORMATION

This kit contains stock solutions in convenient dropper bottles. Slides developed with DAB/ Ni should be dehydrated, cleared, and permanently mounted. For additional information, [view this product review on Biocompare.com](#).

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

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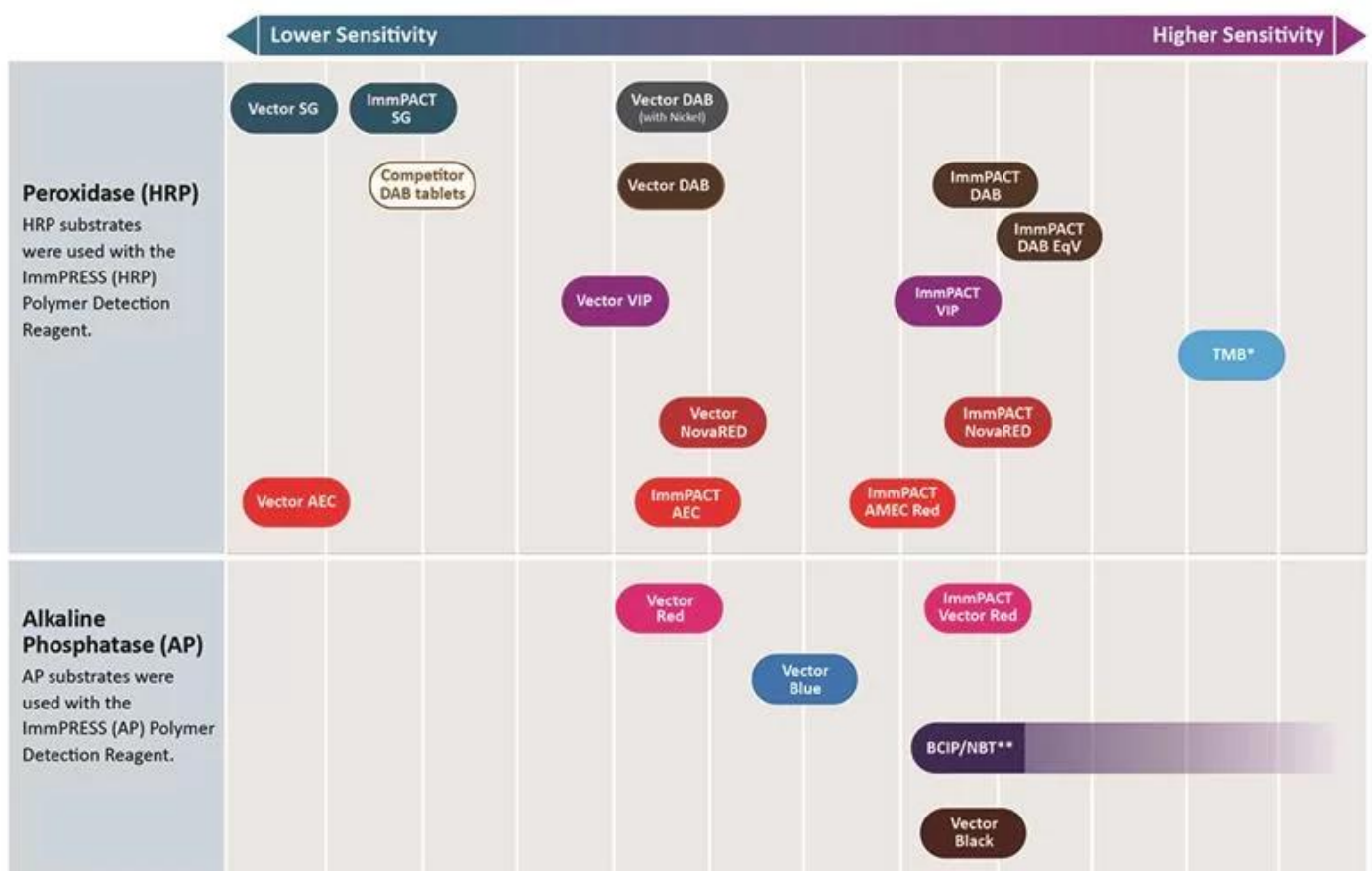
|                      |                         |                       |                     |                    |
|----------------------|-------------------------|-----------------------|---------------------|--------------------|
| Vector Black (black) | <a href="#">SK-5200</a> | Excellent Contrast    | Excellent Contrast* | Excellent Contrast |
| Vector Blue (blue)   | <a href="#">SK-5300</a> | Color Incompatibility | Good Contrast       | Excellent Contrast |
| BCIP / NBT (indigo)  | <a href="#">SK-5400</a> | 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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## Enzyme Substrate Combinations

Recommended combinations of substrates and the recommended order in which they should be used.

| Second Substrate<br>First Substrate |                                                                      | Alkaline Phosphatase                                        |                            |                           | Peroxidase                                          |                                                                      |                             |                                                          |                                               |                                                                     |
|-------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------|----------------------------|---------------------------|-----------------------------------------------------|----------------------------------------------------------------------|-----------------------------|----------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|
|                                     |                                                                      | ImmPACT Vector Red & Vector Red (magenta) SK-5105 & SK-5100 | Vector Blue (blue) SK-5300 | BCIP/NBT (indigo) SK-5400 | ImmPACT VIP & Vector VIP (purple) SK-4605 & SK-4600 | ImmPACT DAB, ImmPACT DAB EqV & DAB (brown) SK-4105, SK-4103, SK-4100 | DAB-Ni (gray-black) SK-4100 | ImmPACT NovaRED & Vector NovaRED (red) SK-4805 & SK-4800 | ImmPACT SG & SG (blue-gray) SK-4705 & SK-4700 | ImmPACT AEC, ImmPACT AMEC Red & AEC (red) SK-4205, SK-4285, SK-4200 |
| Alkaline Phosphatase                | ImmPACT Vector Red & Vector Red (magenta) SK-5105 & SK-5100          |                                                             | —                          | —                         | —                                                   | +                                                                    | +                           | —                                                        | +                                             | —                                                                   |
|                                     | Vector Blue (blue) SK-5300                                           | +                                                           |                            | —                         | +                                                   | +                                                                    | +                           | +                                                        | +                                             | +                                                                   |
|                                     | BCIP/NBT (indigo) SK-5400                                            | +                                                           | —                          |                           | +                                                   | +                                                                    | +                           | +                                                        | +                                             | +                                                                   |
| Peroxidase                          | ImmPACT VIP & Vector VIP (purple) SK-4605, SK-4600                   | —                                                           | +                          | —                         |                                                     | +                                                                    | +                           | —                                                        | +                                             | —                                                                   |
|                                     | ImmPACT DAB, ImmPACT DAB EqV & DAB (brown) SK-4105, SK-4103, SK-4100 | +                                                           | +                          | +                         | +                                                   |                                                                      | —                           | —                                                        | +                                             | +                                                                   |
|                                     | DAB-Ni (gray-black) SK-4100                                          | +                                                           | —                          | —                         | +                                                   | +                                                                    |                             | +                                                        | —                                             | —                                                                   |
|                                     | ImmPACT NovaRED & Vector NovaRED (red) SK-4805, SK-4800              | —                                                           | +                          | +                         | —                                                   | +                                                                    | +                           |                                                          | +                                             | —                                                                   |
|                                     | ImmPACT SG & SG (blue-gray) SK-4705, SK-4700                         | +                                                           | —                          | —                         | +                                                   | +                                                                    | —                           | —                                                        |                                               | +                                                                   |
|                                     | ImmPACT AEC, ImmPACT AMEC Red & AEC (red) SK-4205, SK-4285, SK-4200  | —                                                           | —                          | —                         | —                                                   | +                                                                    | —                           | —                                                        | +                                             |                                                                     |

+

 Indicates good contrast

—

 Indicates incompatibility of substrates for various reasons

## CITATIONS



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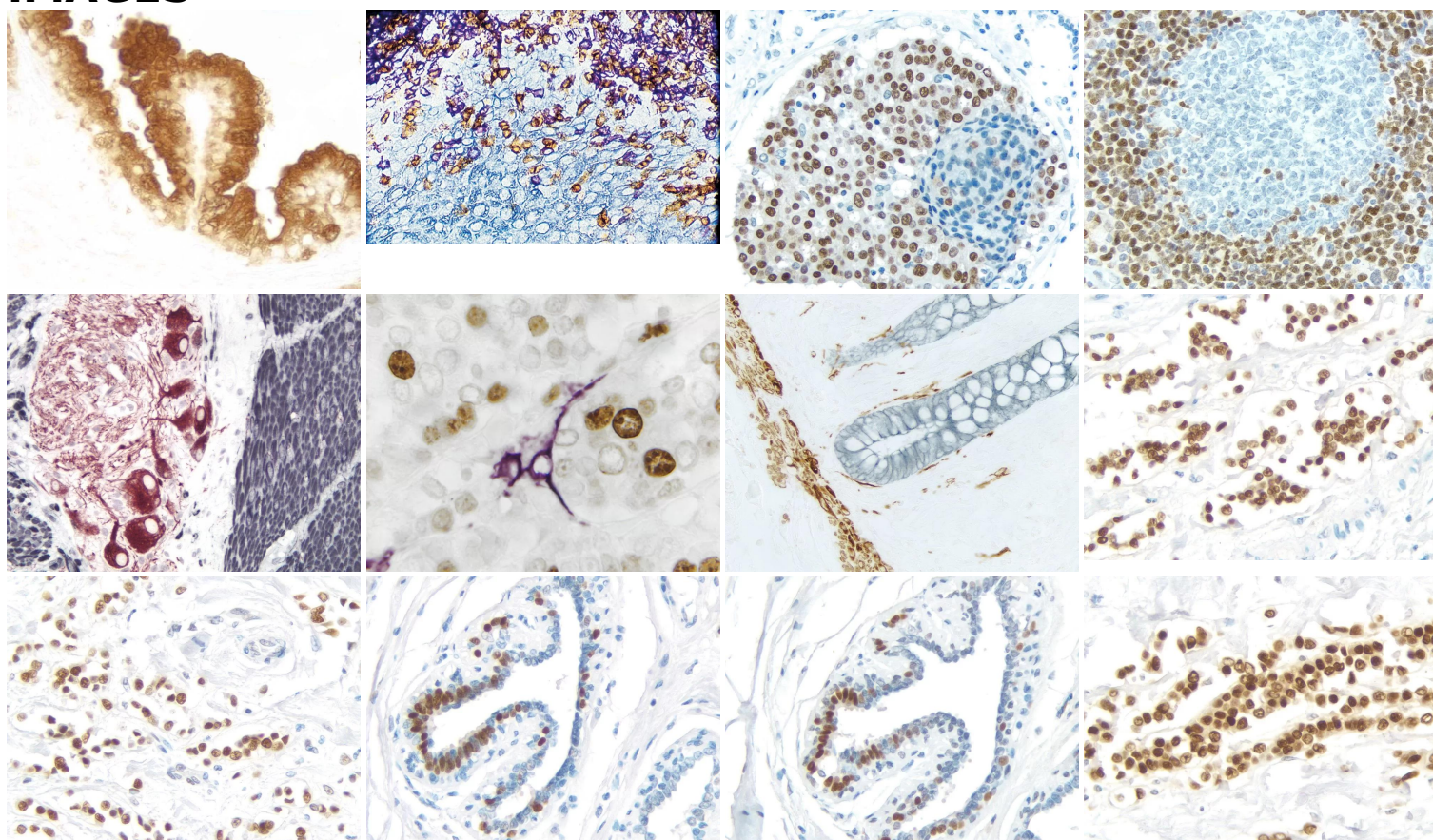
## DOCUMENTS

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

## GALLERY IMAGES



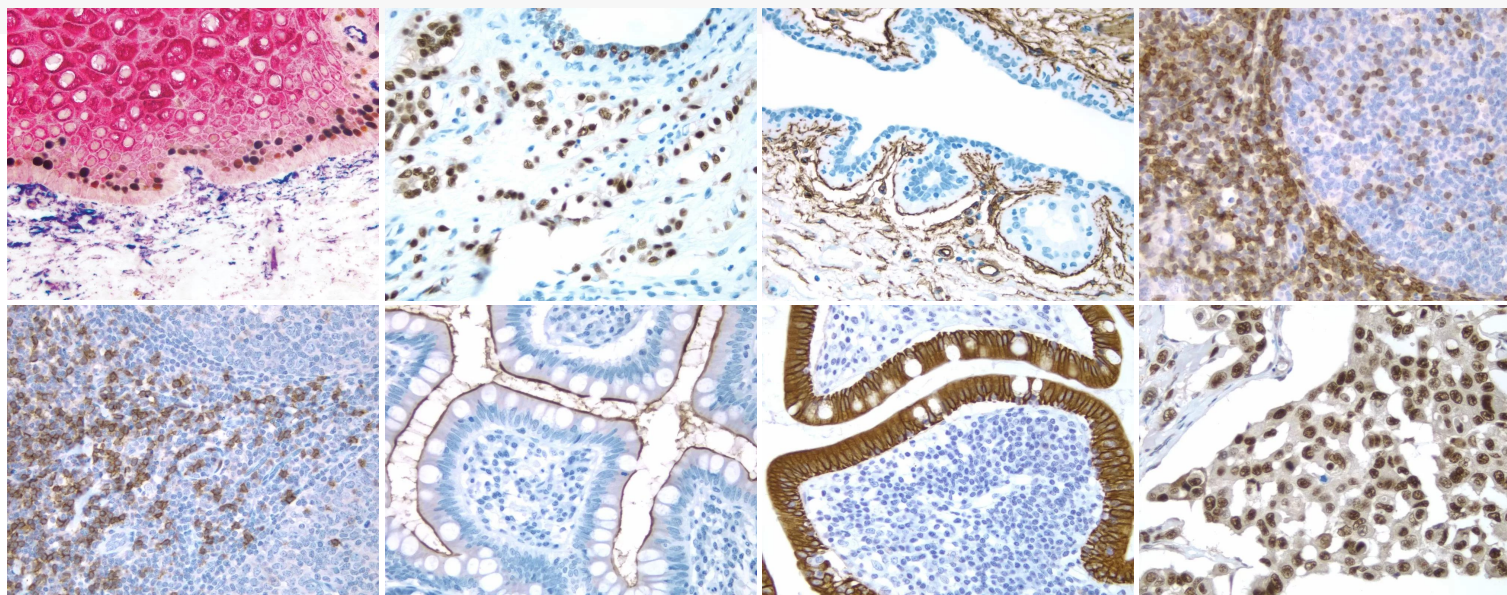
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[DAB Substrate Kit, Peroxidase \(HRP\), with Nickel, \(3,3'-diaminobenzidine\)](https://vectorlabs.com/products/dab-hrp-substrate/)

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