

Blotting Substrates

| Enzyme | Substrate | Product | Prod No | Color | Alcohol soluble product? | Comments |
|----------------------------------|-------------------|--|-------------------------|------------|--------------------------|--|
| For Peroxidase: | | | | | | |
| | TMB | TMB Liquid Substrate System for membranes | T 0565 | Deep Blue | | Safer, more stable alternative to DAB ¹ |
| | DAB | DAB Enhanced Liquid Substrate System | D 6815 | Brown | No | DAB is more sensitive than AEC |
| | | DAB Liquid Substrate System | D 7304 | Brown | No | |
| | | SIGMA FAST™ DAB Tablet Sets | | | | |
| | | 1 ml | D 4168 | Brown | No | |
| | | 5 ml | D 4293 | Brown | No | |
| | | 15 ml | D 4418 | Brown | No | |
| | | w/metal enhancer, 5 ml | D 0426 | Blue-Black | No | More sensitive than DAB without enhancer |
| | AEC | AEC Staining Kit (liquid) | AEC-101 | Red | Yes | Color alternative to TMB and DAB |
| | Luminol | Chemiluminescent Peroxidase Substrate | CPS-1 | — | — | Film required |
| For Alkaline Phosphatase: | | | | | | |
| | BCIP / NBT | BCIP / NBT Liquid Substrate System | B 1911 | Purple | No | BCIP is more sensitive than Fast Red |
| | | BCIP / NBT Purple Liquid substrate for membranes | B 3679 | Purple | No | |
| | | BCIP / NBT Blue Liquid substrate for membranes | B 3804 | Blue | No | |
| | | SIGMA FAST™ BCIP / NBT Tablets | B 5655 | Purple | No | |
| | Fast Red | SIGMA FAST™ Fast Red Tablets, 1ml | F 4648 | Red | Yes | Color alternative to BCIP/NBT |
| | | SIGMA FAST™ Fast Red Tablets, 10ml | F 4523 | Red | Yes | |

Reference: 1. Brand, J.A. et al., Comparison of particulate 3,3',5, 5'-tetramethylbenzidine and 3,3'-diaminobenzidine as chromogenic substrates for immunoblot. Biotechniques, **8**, 58-60 (1990).

AEC: 3-Amino-9-ethylcarbazole, BCIP: 5-Bromo-4-chloro-3-indolylphosphate, DAB: 3,3'-Diaminobenzidine, NBT: Nitro Blue Tetrazolium, TMB: 3,3',5,5'-Tetramethylbenzidine