Product Information

3,3',5,5'-Tetramethylbenzidine Dihydrochloride

Tablet, 1 mg Substrate per Tablet

T3405

Product Description

3,3′,5,5′-Tetramethylbenzidine (TMB) dihydrochloride is a peroxidase substrate suitable for use in ELISA procedures.[1-5] This substrate produces a soluble end product that is blue in color and can be read spectrophotometrically at 370 or 655 nm. The reaction may be stopped with 2 M H_2SO_4, resulting in a yellow solution that is read at 450 nm.

Each tablet contains 1 mg of TMB dihydrochloride substrate. The product is available in packages of 5, 50, or 100 tablets per box, individually foil wrapped forease of use, storage, and safety. Custom packaging and bulk purchase information are available upon request.

Precautions and Disclaimer

This product is for Research Use Only. Not for Use in Diagnostic Procedures. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

0.05 M Phosphate-Citrate Buffer

- Dissolve one phosphate-citrate buffer tablet (for example, P4809) in 100 mL of ultrapure water with stirring, to yield a 0.05 M phosphate-citrate buffer, pH 5.0.

Or

- Add 25.7 mL of 0.2 M dibasic sodium phosphate (for example, S0876), 24.3 mL of 0.1 M citric acid (for example, C7129) and 50 mL of ultrapure water. Adjust the pH to 5.0, if necessary.

TMB Substrate Solution

- Dissolve one TMB dihydrochloride tablet in 1 mL of DMSO and add to 9 mL of 0.05 M Phosphate-Citrate Buffer, pH 5.0. Add 2 µL of fresh 30% hydrogen peroxide (for example, H1009) per 10 mL of substrate buffer solution, immediately prior to use.

Or

- Dissolve one TMB dihydrochloride tablet in 1 mL of DMSO and add to 9 mL of 0.05 M Phosphate-Citrate buffer, pH 5.0, containing 0.03% sodium perborate (capsules, P4922).

Stop Solution

The reaction may be stopped by the addition of 50 µL of 2 M H2SO4 per 200 µL of reaction mixture.

Storage/Stability

Store the TMB dihydrochloride tablets at 2–8 °C. Protect from heat, light, and moisture. Allow tablets to reach room temperature prior to use.

References

1. Liem, H.H. et al., Anal. Biochem., 98(2), 388-393 (1979).
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3. Fulton, S.A. et al., J. Infect. Dis., 178(4), 1105-1114 (1998).
4. Slocombe, L.L., and Colditz, I.G., Food Agr. Immunol., 22(2), 135-143 (2011).
5. Ucisik, M.H. et al., Colloids Surf. B Biointerfaces, 128, 132-139 (2015).

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