

**ReadiUse™ Tyramide (TSA)/Styramide (PSA)
Optimized Reaction Buffer**

 Catalog number: 45090
 Unit size: 1000 Reactions

Component	Storage	Amount (Cat No. 45090)
Component A: TSA/PSA buffer	Refrigerated (2-8 °C)	1 bottle (100 mL)
Component B: Stabilized 3% Hydrogen peroxide	Refrigerated (2-8 °C)	1 vial (100 µL)

OVERVIEW

For many immunohistochemical (IHC) applications, the traditional enzymatic amplification procedures are sufficient for achieving adequate antigen detection. However, several factors limit the sensitivity and utility of these procedures. Tyramide signal amplification (TSA) has proven to be a particularly versatile and powerful enzyme amplification technique with improved assay sensitivity. TSA is based on the ability of HRP, in the presence of low concentrations of hydrogen peroxide, to convert labeled tyramine-containing substrate into an oxidized, highly reactive free radical that can covalently bind to tyrosine residues at or near the HRP. Power Styramide™ Signal Amplification (PSA™) is a recent upgrade to the TSA system with improved fluorescence signal 10-50 times higher than the corresponding TSA reagents. This HRP-induced radical reaction buffer is optimized for running both TSA and PSA reactions.

working solution needed per coverslip or per well in a 96-well microplate.

Note: The Styramide™ working solution must be used within 2 hours after preparation and avoid direct exposure to light.

DISCLAIMER

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AT A GLANCE
Protocol summary

1. Fix/permeabilize/block cells or tissue
2. Add primary antibody in blocking buffer
3. Add HRP-conjugated secondary antibody
4. Prepare Styramide™ (PSA) or Tyramide (TSA) working solution and apply in cells or tissue for 5-10 minutes at room temperature

PREPARATION OF STOCK SOLUTIONS

Unless otherwise noted, all unused stock solutions should be divided into single-use aliquots and stored at -20 °C after preparation. Avoid repeated freeze-thaw cycles

Styramide™ (PSA) stock solution (100X)

Add 100 µL of DMSO into the vial of iFluor® dye-labeled Styramide™ conjugate (for example, Cat. 45000) to make 100X Styramide™ stock solution.

Note: Make single-use aliquots, and store unused 100X stock solution at 2-8 °C in a dark place and avoid repeat freeze-thaw cycles.

Hydrogen peroxide stock solution

Add 10 µL of 3% hydrogen peroxide (Component B) to 90 µL of ddH₂O.

Note: Prepare the 100X H₂O₂ solution fresh on the day of use.

PREPARATION OF WORKING SOLUTION
Styramide™ (PSA) working solution (1X)

Every 1 mL of PSA working solution requires 1 mL TSA/PSA buffer (Component A), 10 µL of Styramide™ stock solution, and 10 µL of H₂O₂ stock solution.

Note: 1 mL is enough for 10 tests based on 100 µL of Styramide™