

iFluor™ 647 TyramideCatalog number: 45110
Unit size: 200 Slides**Product Details**

Storage Conditions	Freeze (<-15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Dark blue solid
Molecular Weight	1092.20
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	656 nm
Emission Wavelength	670 nm

Applications

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. To achieve maximal IHC detection, tyramine is pre-labeled with a fluorophore. The signal amplification conferred by the turnover of multiple tyramide substrates per peroxidase label translates ultrasensitive detection of low-abundance targets and the use of smaller amounts of antibodies and hybridization probes. In immunohistochemical applications, sensitivity enhancements derived from TSA method allow primary antibody dilutions to be increased to reduce nonspecific background signals, and can overcome weak immunolabeling caused by suboptimal fixation procedures or low levels of target expression. iFluor 647 tyramide contains the bright iFluor 647 that can be readily detected with the standard Cy5 filter set. It is an excellent replacement for Alexa Fluor® 647 tyramide (Alexa Fluor® is the trade mark of ThermoFisher) or other spectrally similar fluorescent tyramide conjugates or TSA reagents (such as Cy5 tyramide).