

**XFD594 tyramide reagent *Same Structure
to Alexa Fluor™ 594 tyramide***Catalog number: 11082
Unit size: 200 slides**Product Details**

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

Chemical Properties

Appearance	Dark red solid
Molecular Weight	841.95
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	590 nm
Emission Wavelength	618 nm

Applications

XFD594 is manufactured by AAT Bioquest, and it has the same chemical structure of Alexa Fluor® 594 (Alexa Fluor® is the trademark of ThermoFisher). 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. XFD594 tyramide contains the bright XFD594 that can be readily detected with the standard Texas Red filter set.