XFD594-Wheat Germ Agglutinin (WGA) Conjugate

Catalog number: 25509
Unit size: 1 mg

Component	Storage	Amount (Cat No. 25509)
XFD594-Wheat Germ Agglutinin (WGA) Conjugate	Freeze (< -15 °C), Minimize light exposure	1 mg

OVERVIEW

XFD594 is manufactured by AAT Bioquest, and it has a chemical structure similar to that of Alexa Fluor® 594 (Alexa Fluor® is the trademark of Thermo Fisher). Wheat germ agglutinin (WGA) is a lectin that binds to N-acetyl-D-glucosamine and sialic acid. Since WGA binds to glycoconjugates its derivatives and conjugates are widely used to label cell membranes and fibrotic scar tissue for fluorescence imaging and analysis. XFD594 conjugate of WGA is equivalent to the Alexa Fluor® 594 conjugate of WGA. It exhibits bright, red fluorescence. XFD594 WGA conjugate binds to sialic acid and N-acetylglucosaminyl residues.

KEY PARAMETERS

Fluorescence microscope

Emission	Cy3/TRITC filter set
Excitation	Cy3/TRITC filter set
Recommended plate	Black wall/clear bottom

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

XFD594-Wheat Germ Agglutinin (WGA) Conjugate stock solution (200X)

Add 500 µL of ddH_2O into the powder form to make a 2 mg/mL stock solution.

Note: The reconstituted conjugate solution can be stored at 2-8 °C for short-term storage or at -20 °C for long-term storage.

PREPARATION OF WORKING SOLUTION

XFD594-Wheat Germ Agglutinin (WGA) Conjugate working solution (1X)

Add 5 µL of 200X WGA conjugate solution to 1 mL HHBS Buffer.

Note: The optimized staining concentration may be different with different cell lines. The recommended starting concentration is 5-10 µg/mL for live cells.

SAMPLE EXPERIMENTAL PROTOCOL

Warm the vial to room temperature centrifuge briefly before opening. Staining protocols vary with applications. Appropriate dilution of conjugates should be determined experimentally.

Live Cells Stain

1. Wash cells twice with a HHBS buffer.
2. Add 100 µL XFD594-WGA working solution.
3. Incubate cells with working solution for 10-30 minutes at 37 °C.
4. Wash the cells twice with HHBS buffer.
5. Image cells on a fluorescence microscope using Cy3/TRITC filter set.

Fixed Cells Stain

WGA conjugates can be also used to stain fixed cells.

1. Fix cells with 4% formaldehyde in PBS.

   Note: For fixed cell membrane staining, it is recommended to stain without the permeabilization step. A permeabilization step after fixation can facilitate staining intracellular compartments such as Golgi and Endoplasmic Reticulum (ER) structures.

2. Add 100 µL XFD594-WGA working solution.
3. Incubate cells with working solution for 10-30 minutes at room temperature.
4. Wash the cells twice with HHBS buffer.
5. Image cells on a fluorescence microscope using Cy3/TRITC filter set.

DISCLAIMER

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