Blank 4.5mm Lateral Flow Strips for LFA Development
Catalog Number: **AU2054**
Product Data Sheet

Introduction:

Attogene's Blank 4.5mm Lateral Flow Strips for LFA Development is a convenient, simple, and ready to be used out of the box product designed to help labs with limited facilities engage in proof-of-concept LFA development. We provide a product that facilitates equal, if not superior results to leading brands products at a significantly improved cost. With a high barrier to entry, we recognize that it is important to provide laboratories with accessible components that will allow for more innovation in this sector.

Kit Contents:

1. 100 4.5X60mm strips
2. Two strip cannisters with an integrated desiccant.
3. One 96 well plate

Component	Description	Properties
CO-UTCP80-17	Untreated Glass Fiber Conjugate Pad	**Thickness:** 0.42mm **Wicking Rate:** 2.2 (s/2 cm)
CO-WM110-22	Cellulose Fiber Wick	**Thickness:** 1.10mm
CO-SS40-60	Nitrocellulose Membrane	**Mylar Thickness:** 100µm **Membrane Thickness:** 100µm **4cm Wicking Time:** 90 sec. **Protein Binding:** Highest protein binding capacity available

Usage guide:

1. **Capture antibody/antigen conjugate application.**
   a. Spot reagents between 0.1-2mg/mL. There may be instances were going beyond this range may yield improved sensitivity, however, this is a typical concentration range.
   b. Use a protein such as BSA, or a saccharide such as sucrose to stabilize reagents on the nitrocellulose.
   c. Keep spotting volumes around 0.5-1uL total.
   d. Depending on the application, it is recommended to dry the strips at 2-8˚C for a period of 12-24 hours or at 37˚C for anywhere between 1-12 hours.

2. **Running the direct LFA:**
    a. For usage directly in a microwell, sample/running buffer amounts between 80-200uL is advised.
    b. Mix your sample and running buffer with 1-10µL of 10 OD of the appropriate gold conjugate. For usage with a fluorescent reporter particle such as Quantum Dots, Europium Beads, or Phycoerythrin proper amounts must be determined via titration.
    c. Insert the strip's conjugate pad into the microwell.
    d. Typical LFA running times range from 5-30 minutes. This must be determined through experimentation.

Related Attogene Products Catalog Number:

1. **Protein labeling and purification**
    a. **CO2027** Microspin Desalting Columns 7K MWCO
    b. **CO2028** Protein Biotinylation Kit
    c. **AU2059** Lateral Flow Starter Kit
2. **Consumables**
    a. **CO2022** Lateral Flow Cassettes
    b. **CO2033** 96-well Plate
    c. **AU2035** RNase Free Buffer Screening Pack
    d. **AU2054** 4.5mm X 60mm Strips for Lateral Flow Development
3. **Reporter Reagents**
    a. **AU2012** 10nm Colloidal Gold
    b. **AU2013** 30nm Colloidal Gold
    c. **AU2014** 40nm Colloidal Gold
    d. **AU2015** 60nm Colloidal Gold
    e. **AU2016** Protein A Colloidal Gold for Lateral Flow
    f. **AU2017** Streptavidin Colloidal Gold for Lateral Flow
    g. **AU2043** Streptavidin CdSe/ZnS Quantum Dots for Lateral Flow
    h. **AU2050** Streptavidin Europium Beads for Lateral Flow
    i. **AU2055** Streptavidin Phycoerythrin for Lateral Flow

Troubleshooting:

If it becomes evident that spotted reagents aren't adhering to the nitrocellulose surface. It may be beneficial to add methanol or ethanol at a very low concentration to improve binding kinetics. Ensure reagent's biocompatibility before adding any organic solvents. Protein or molecules may also need to be attached to a carrier protein such as BSA.

Non-specific results may be induced by a variety of factors such as the LFA running time was too long, buffer is incompatible, reagents are not compatible, or reagents were not blocked sufficiently/correctly etc.

Storage:

All components should be stored at temperatures ranging from 2˚C-RT. To ensure longevity of all components, avoid exposure to extreme temperatures and leave the strips in their provided canisters which contain an integrated desiccant component.

Product Safety and Handling:

Components provided in this kit are for R&D purposes only. This kit is not for use in diagnostic procedures.