

LudgerTag™ 2AB and 2AA Glycan Labelling

Kits with Safer Reductant

Fluorescent labelling methods for glycoprofiling of therapeutic glycoproteins are well established and aid subsequent separation and quantitation using a range of techniques. These include high performance liquid chromatography (HPLC and UHPLC), capillary electrophoresis (CE), and mass spectrometry.

Of the fluorescent labels available, 2-aminobenzamide (2-AB) and 2-aminobenzoic acid (2-AA) are most widely used for oligosaccharide profiling. Existing 2-AA and 2-AB labelling kits use sodium cyanoborohydride as a reducing agent during glycan labelling. This reagent is toxic so a fume cupboard should be used during handling. To conform with emerging Health and Safety regulations we are now replacing these with our new VP glycan kits that use picoline borane which is a significantly safer reductant. This technology, developed in collaboration with Leiden University Medical Centre, The Netherlands, has now been patented

The VP kits have the same glycan labelling performance as the traditional kits but are safer, more convenient (fewer vials to mix) and the reagents are more stable.

We also offer T1 cartridges for post-labelling cleanup of 2-AB and 2-AA tagged glycans. These replace the traditional S-cartridges but are easier to use, faster, and suitable for automation on laboratory robots.

Features and benefits of LudgerTag™ 2PB kits:

Fully validated

The kits have been validated following ICH Q2(R1) guidelines and beta-tested in the field. Precision values were excellent, with CVs of <5% for peaks with relative areas over 5% and CVs of <8% for peak with relative areas less than 5% (see Figure 1). The kits offer equivalent labelling efficiency as standard LudgerTag[®] 2AA and 2AB labelling kits containing sodium cyanoborohydride (Figure 2).

Improved Safety

2-PB has lower toxicity compared with sodium cyanoborohydride.

Ease of use

Each kit comprises two premixed bottles; one containing acetic acid and DMSO solution and the other containing 2-AB or 2-AA label combined with 2PB. This makes the labelling process simpler.

Figure 1: Overlay of 48 replicates of 2AB-labelled human IgG glycans reduced with picoline borane reductant run on a HILIC UHPLC column. 2.5 µg of IgG glycans labelled for each replicate.

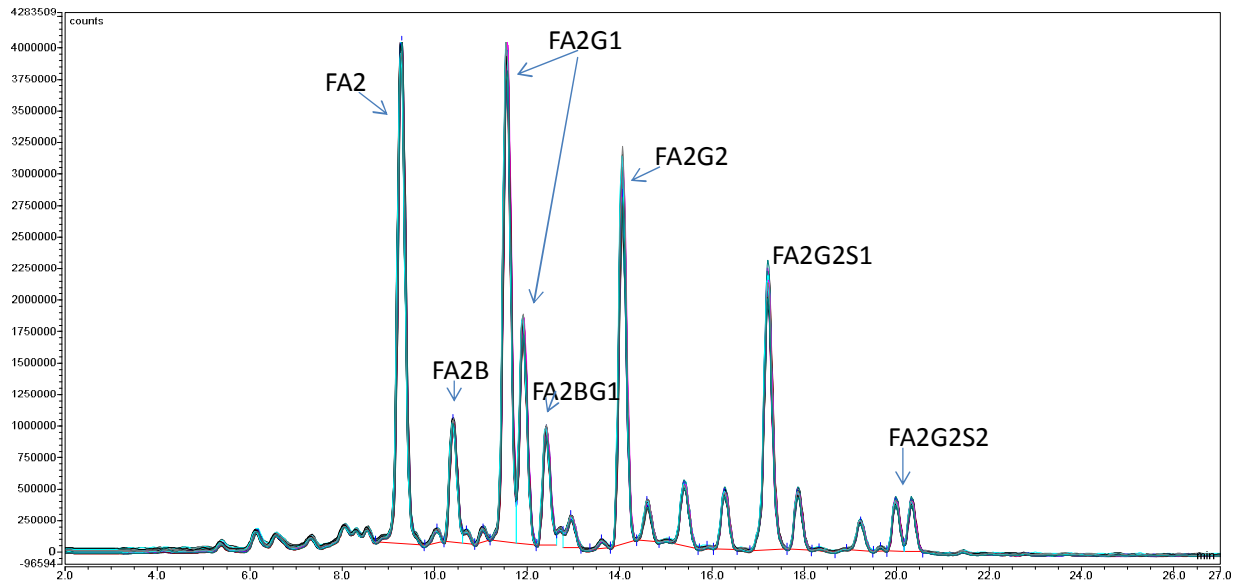
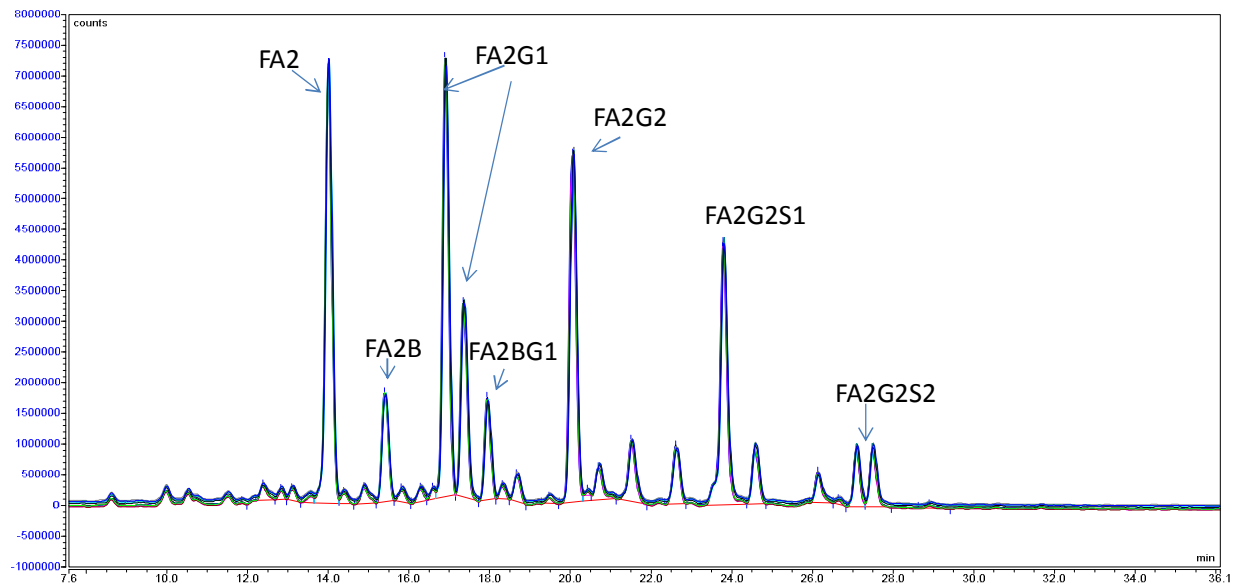


Figure 2: 2AB labelling of human IgG glycans run on a HILIC UHPLC column comparing 5 replicates of reduced with picoline borane reductant with 5 replicates reduced with sodium cyanoborohydride.



Ordering information

LudgerTagi 2-AB labelling kit with 2PB

Cat# LT-KAB-VP24

LudgerTagi 2-AA labelling kit with 2PB

Cat# LT-KAA-VP24

LudgerCleani T1 cartridges

Cat# LC-T1-A6

To request a quote or place an order please contact info@ludger.com