Certificate of Stability

LZ-FUCOSIDASE-01-KIT

Stability Question

What is the enzyme LZ-FUCOSIDASE-01-KIT performance when exposed to higher ambient temperatures for a prolonged period of time?

Stability Assay

LZ-FUCOSIDASE-01-KIT was subjected to 37˚C, room temperature or 4°C for up to 21 days. Each kit was then used in the following activity assay: 1µL of LudgerZyme α1-3,4 fucosidase (LZ-FUCOSIDASE-01-50) was incubated with 0.1 µg procainamide labelled substrate (3-Sialyl Lewis X) in a 10µL reaction containing 2µL 5X LudgerZyme α1-3,4 fucosidase buffer (LZ-FUCOSIDASE-01-BUFF). The reaction was incubated for 1 hour at 37°C. Reaction products were cleaned-up using Post-exoglycosidase Clean-up Plate (LC-EXO-96) and dried. Purified glycans were analysed by UHPLC with fluorescence detection. Complete removal of the fucose from 3-Sialyl Lewis X peak indicates an active enzyme.

Stability Outcome.

LZ-FUCOSIDASE-01-KIT remains stable after 7 days incubation at either 37˚C, room temperature or at 4°C (Figure 1).

LZ-FUCOSIDASE-01-KIT remains stable after 21 days incubation at either 37˚C, room temperature or at 4°C (Figure 2)

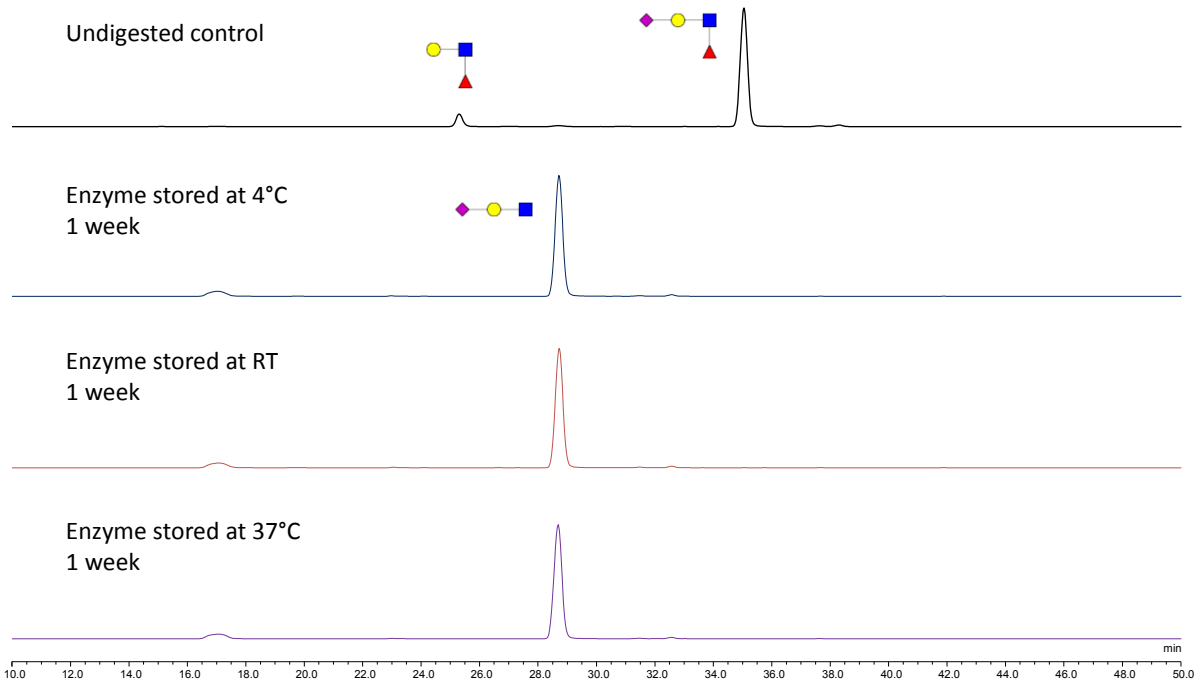

Figure 1. *HILIC-UHPLC stack profiles of procainamide labelled sialyl Lewis X glycan digested with LZ-FUCOSIDASE-01 during 1 h incubation, following enzyme storage under stress conditions (room temperature and 37°C) for 1 week, compared to undigested control (top chromatogram) and control enzyme stored for 1 week at 4°C (second top chromatogram).*
Y axis normalised.

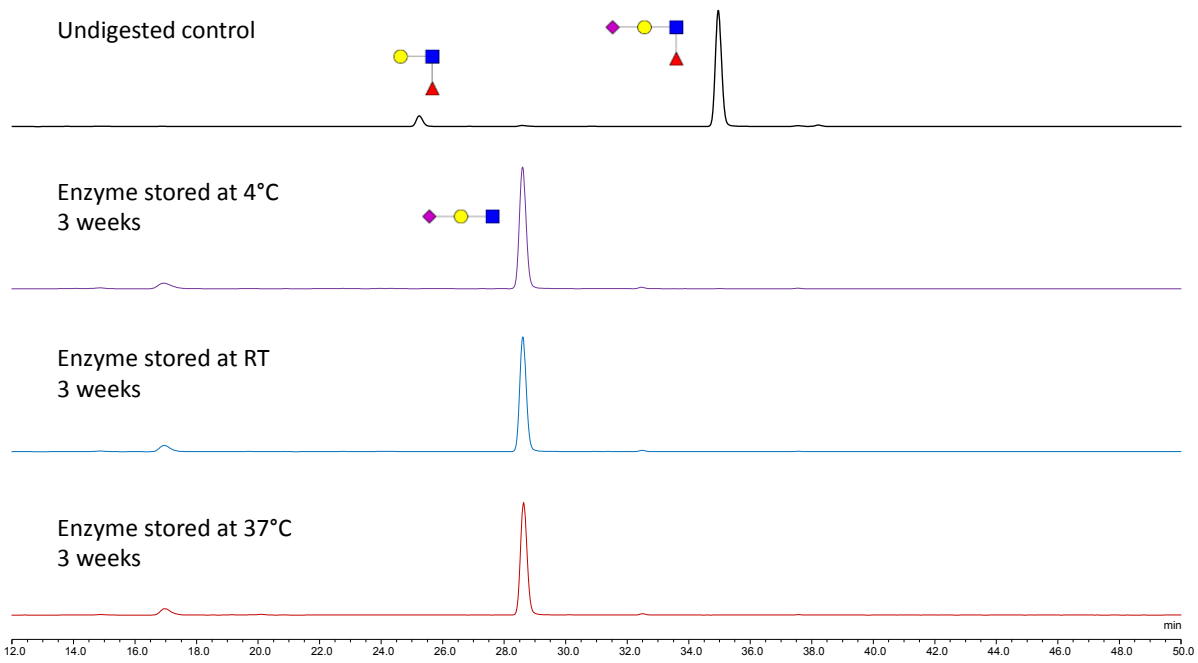

Figure 2. *HILIC-UHPLC stack profiles of procainamide labelled sialyl Lewis X glycan digested with LZ-FUCOSIDASE-01 during 1 h incubation, following enzyme storage under stress conditions (room temperature and 37°C) for 3 weeks, compared to undigested control (top chromatogram) and control enzyme stored for 1 week at 4°C (second top chromatogram).*

Y axis normalised.