



**S3 Fig. Measurement of incorporation of  $^{13}\text{C}$  glycerol into the mannose and galactose residues of VSG.** Total ion chromatograms of the methyl-glycoside TMS derivatives from wild-type (panels A-B) and THT1/THT2 knockdown trypanosomes (panels C-D) grown in the absence and presence of  $^{13}\text{C}$  glycerol, respectively. The peaks due to mannose (Man), galactose (Gal) and the *scyllo*-inositol internal standard (s-I) are indicated. The insets show a detail of the electron impact mass spectra of the main Man peak, illustrating the natural abundance of m/z 206 relative to m/z 204 (panel A) compared to a sample where  $^{13}\text{C}$  has been incorporated into the VSG sugar residues (panel D). One representative replicate, n = 3.