

Supplemental information:

Supplemental figure 1: a-e Top: The full MS spectrum and ETD mass spectrum of the five highest scoring peptides identified in the internal CV stepping dataset only. Middle: Full scan mass spectrum (and ETD mass spectrum if present) identified by manual analysis of the external CV stepping dataset. Bottom: Full scan mass spectrum (and ETD mass spectrum if present) identified by manual analysis of the SCX prefractionation dataset. **f-j** Top: The full MS spectrum and ETD mass spectrum of the five highest scoring peptide identified in the SCX dataset only. Middle: Full scan mass spectrum (and ETD mass spectrum if present) identified by manual analysis of the internal CV stepping dataset. Bottom: Full scan mass spectrum (and ETD mass spectrum if present) identified by manual analysis of the external CV stepping dataset.

Supplemental figure 2: a-e Top: The full MS spectrum and CID mass spectrum of the five highest scoring peptides identified in the external CV stepping dataset only. Middle: Full scan mass spectrum (and CID mass spectrum if present) identified by manual analysis of the internal CV stepping dataset. Bottom: Full scan mass spectrum (and CID spectrum if present) identified by manual analysis of the SCX prefractionation dataset. **f-j** Top: The full MS spectrum and CID mass spectrum of the five highest scoring peptides identified in the internal dataset only. Middle: Full scan mass spectrum (and CID spectrum if present) identified by manual analysis of the external CV stepping dataset. Bottom: Full scan mass spectrum (and CID spectrum if present) Identified by manual analysis of the SCX prefractionation dataset. **k-o**: The full MS

spectrum and CID mass spectrum of the five highest scoring peptide identified in the SCX dataset only.

Supplemental table 1: Mascot significance values and SEQUEST XCorr values applied to the ETD and CID datasets to achieve a 1% FDR.

Supplemental table 2: Proteins identified from the ETD datasets, (group 1 yellow = internal FAIMS method, group 2 green = external FAIMS method and group 3 blue = SCX)

Supplemental table 3: Peptides identified from the ETD datasets, (group 1 yellow = internal FAIMS method, group 2 green = external FAIMS method and group 3 blue = SCX).

Supplemental table 4: Proteins identified from the CID datasets (group 1 yellow = internal FAIMS method, group 2 green = external FAIMS method and group 3 blue = SCX).

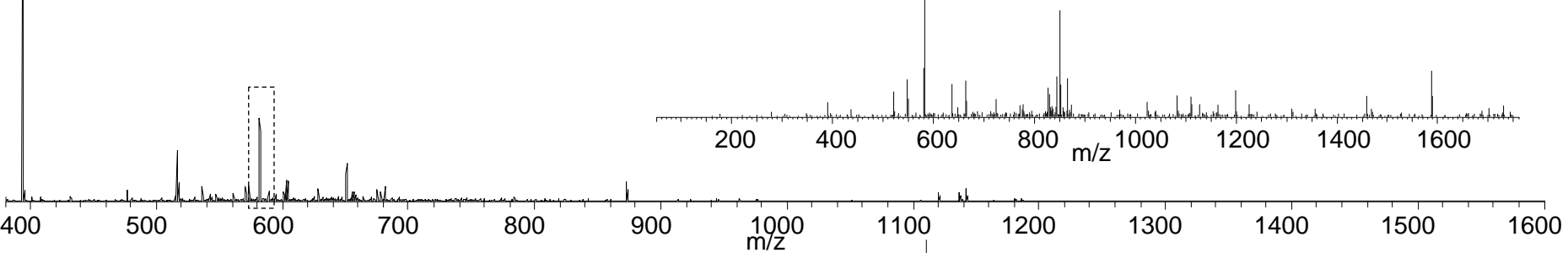
Supplemental table 5: Peptides identified from the CID datasets (group 1 yellow = internal FAIMS method, group 2 green = external FAIMS method and group 3 blue = SCX).

CV=-50 V [AMGIMNSFVNDIFER]³⁺

RT: 28.26

Supp fig 1a

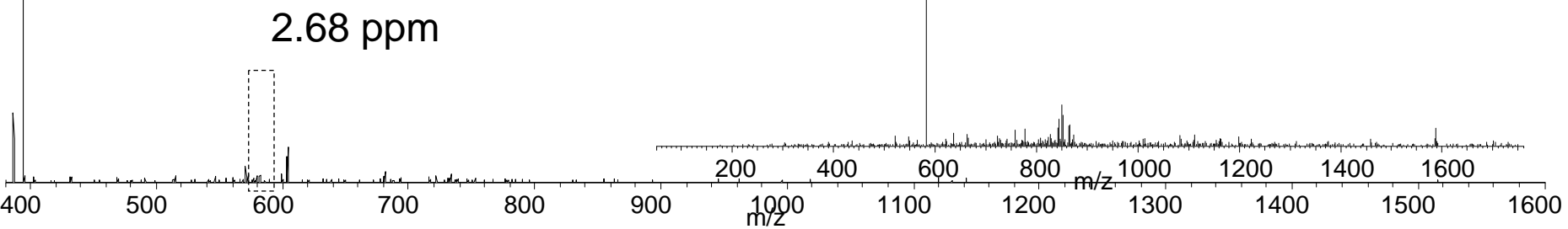
Internal



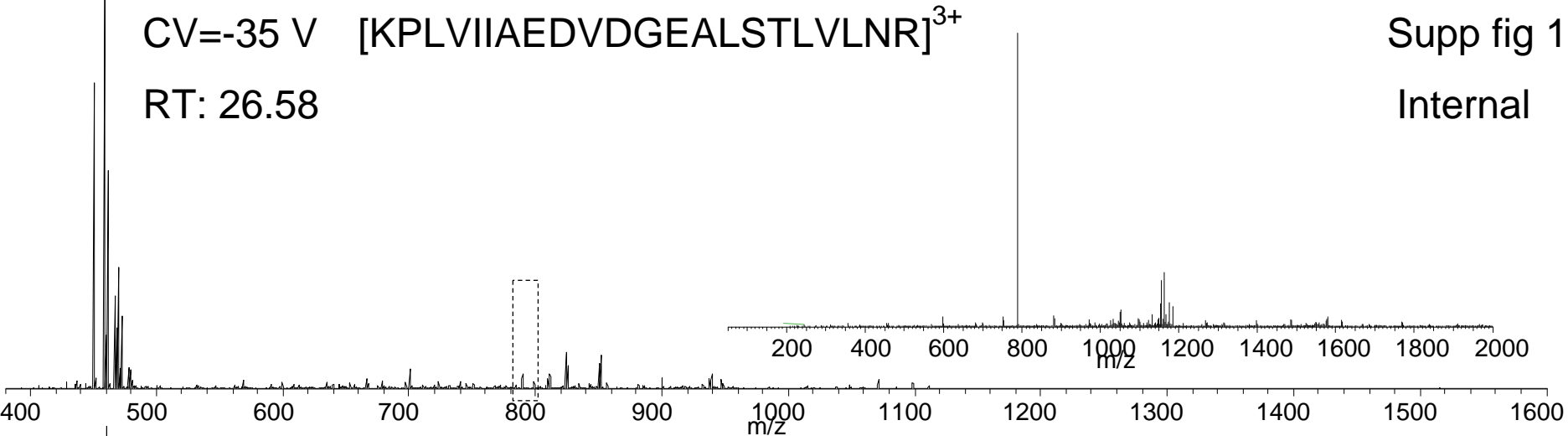
CV=-50 V

RT: 27.22

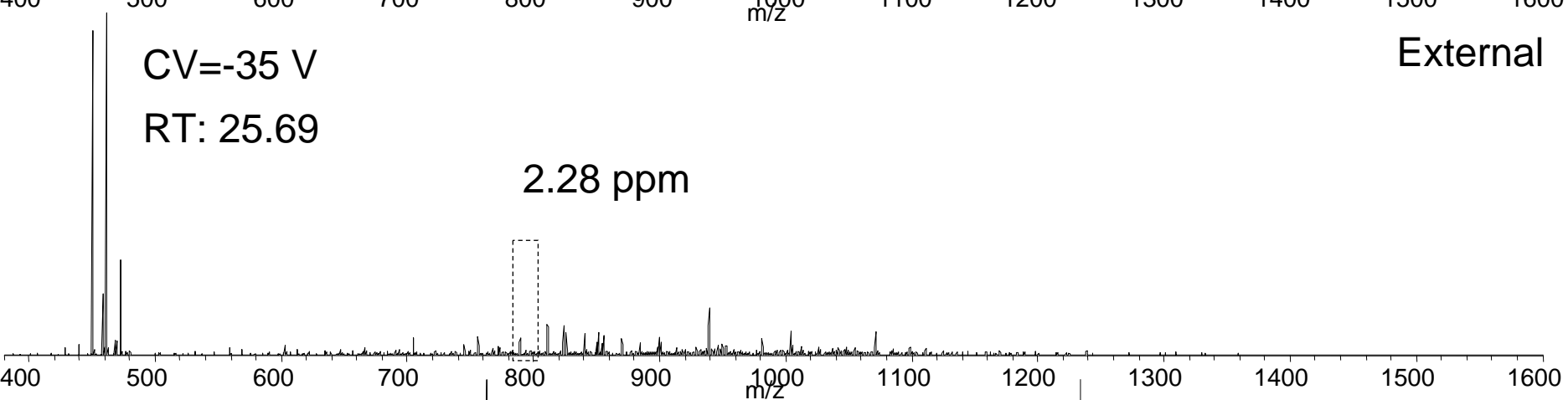
External



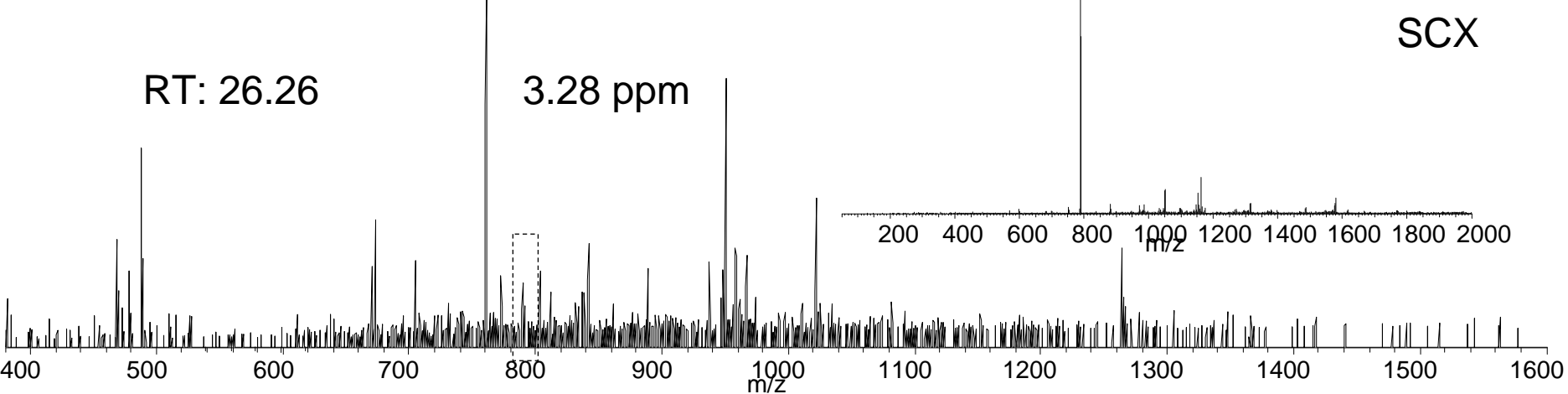
Internal



External



SCX



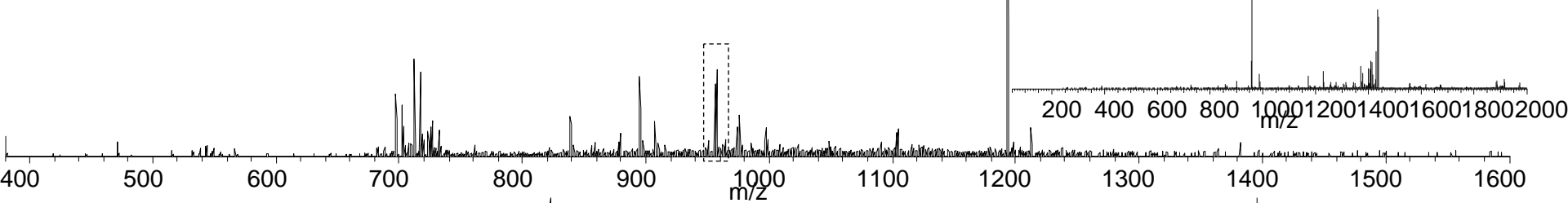
CV=-25 V

[TALLDAAGVASLLTTAEVTVTEIPKEEK]³⁺

Supp fig 1c

RT: 31.71

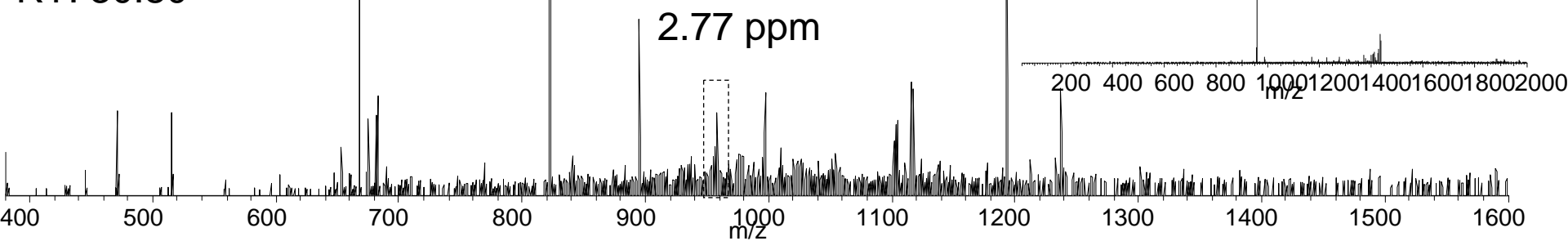
Internal

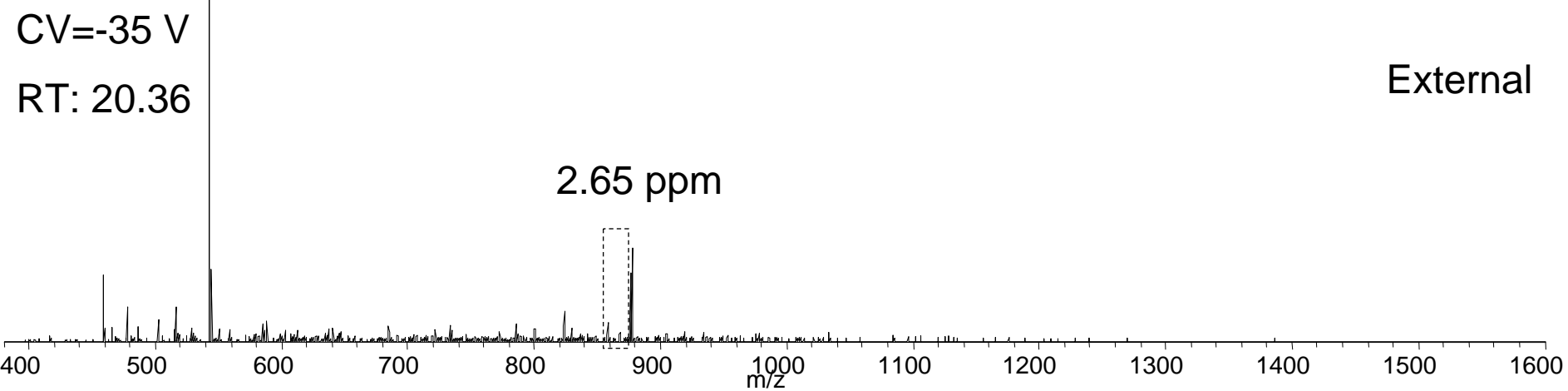
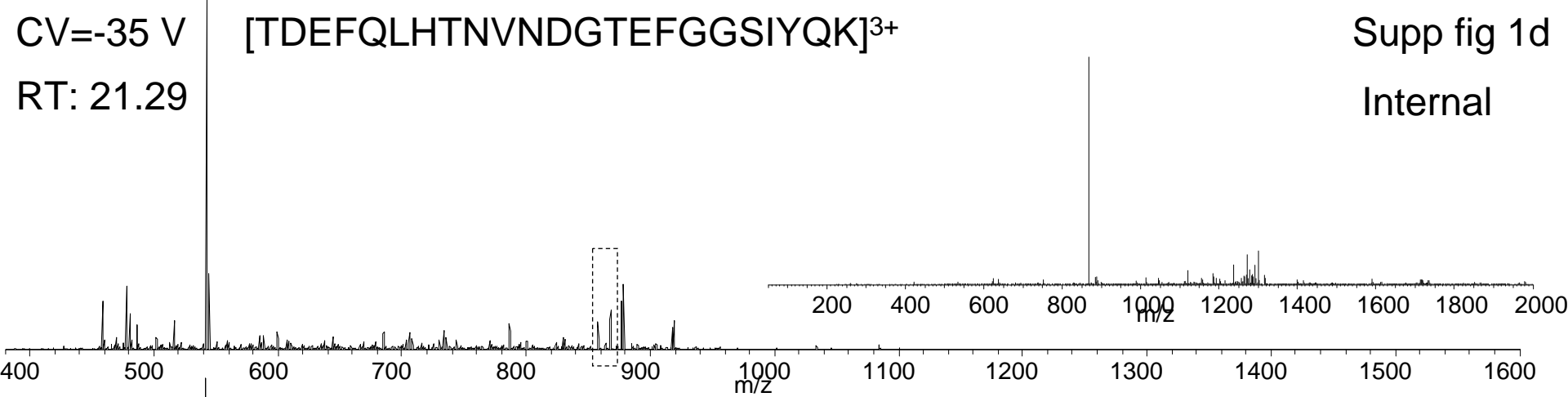


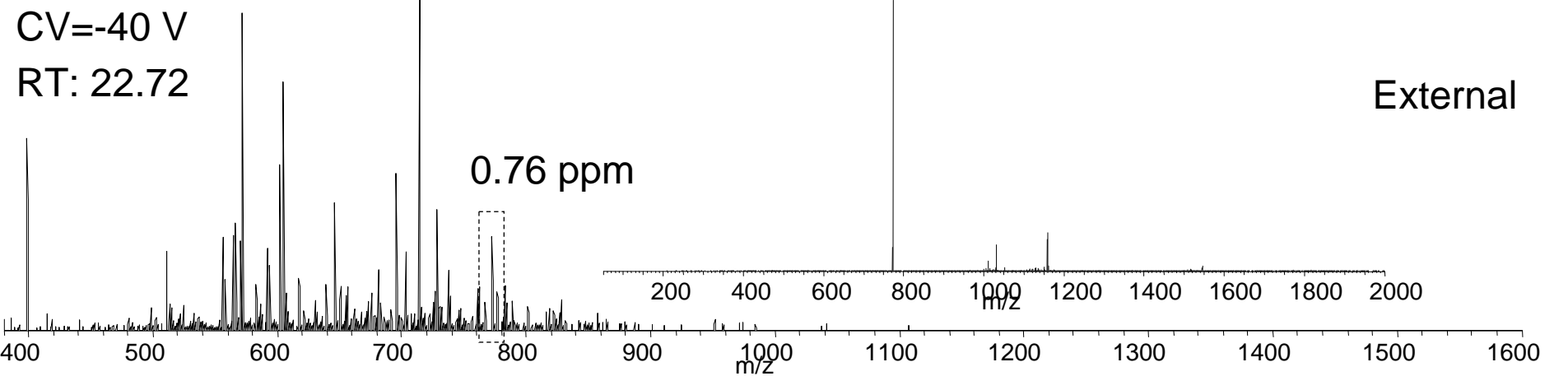
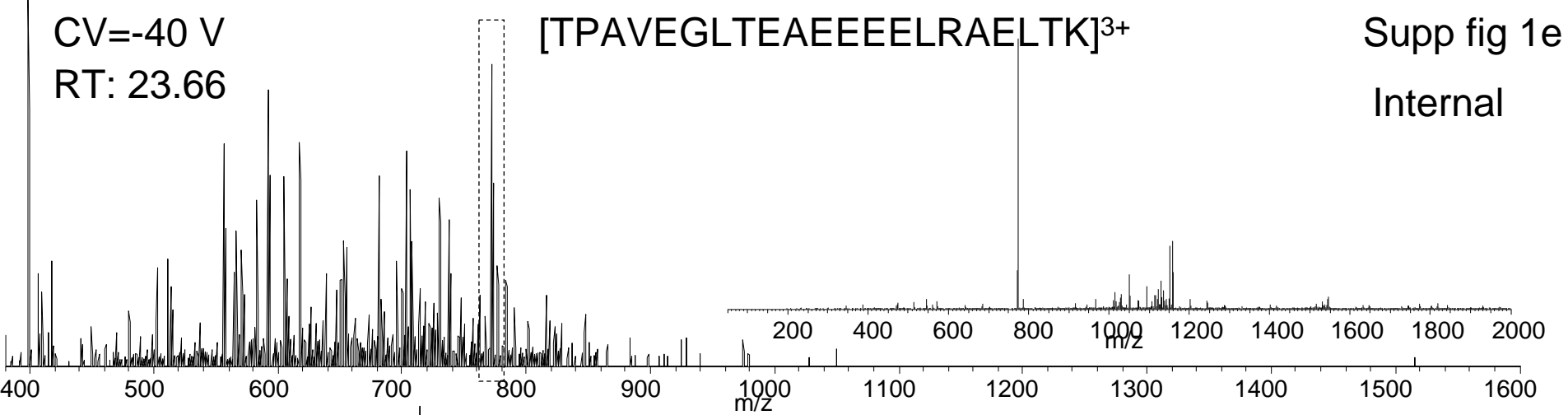
CV=-25 V

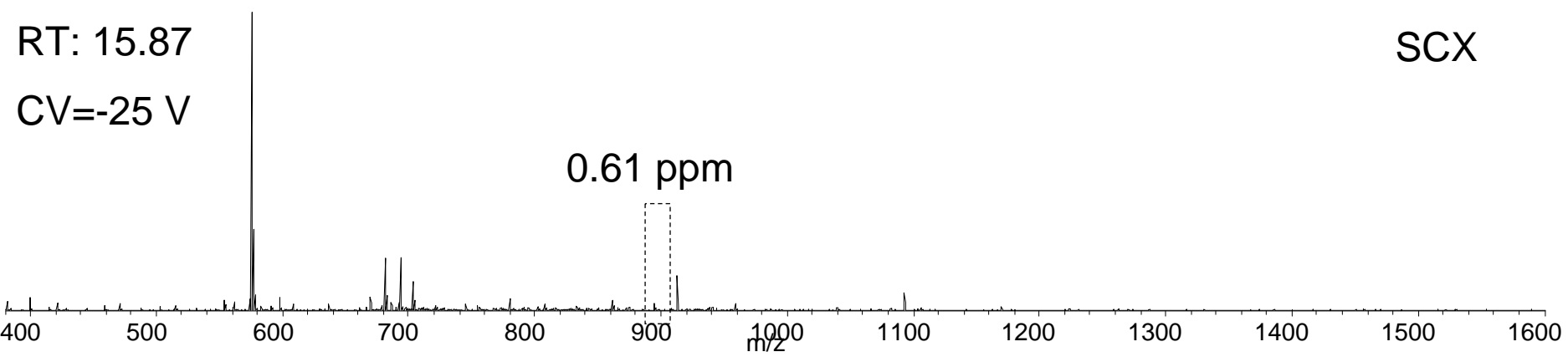
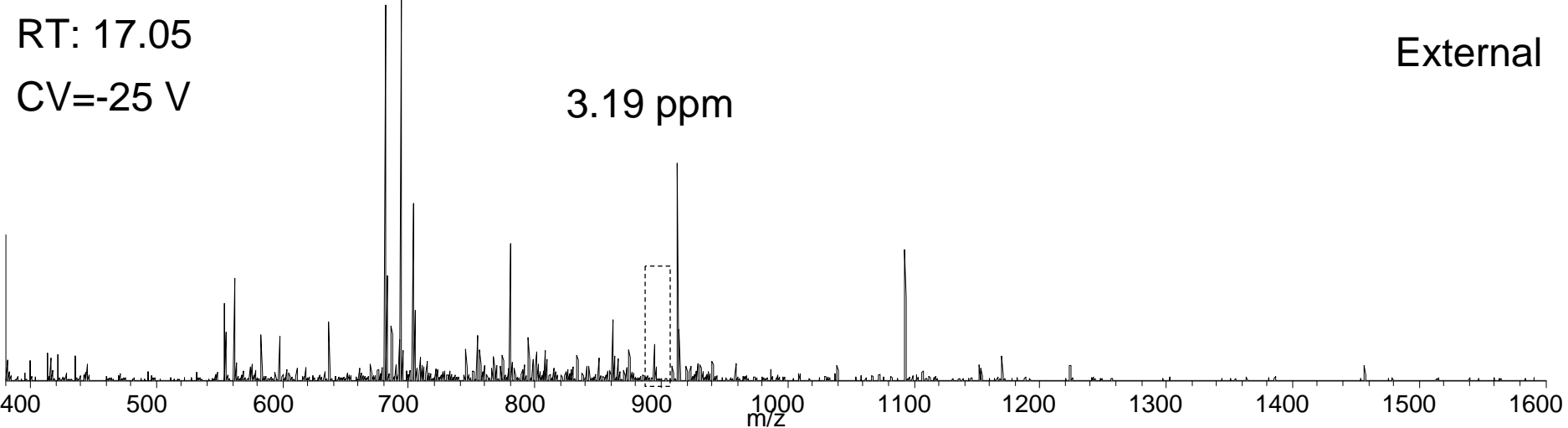
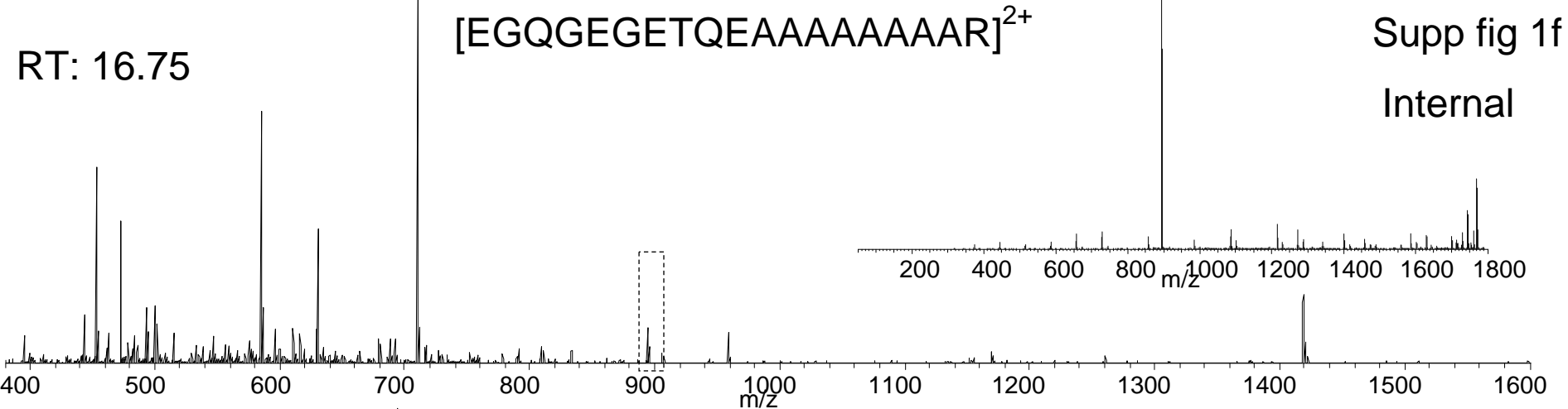
RT: 30.80

External







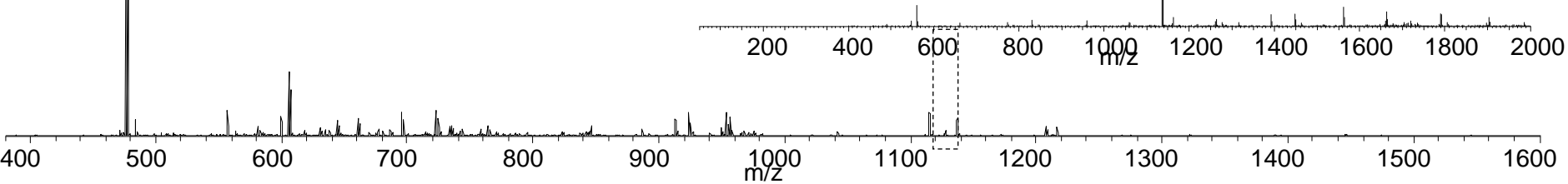


[GVVPLAGTNGETTTQGLDGLSER]²⁺

RT: 21.41

Supp fig 1g

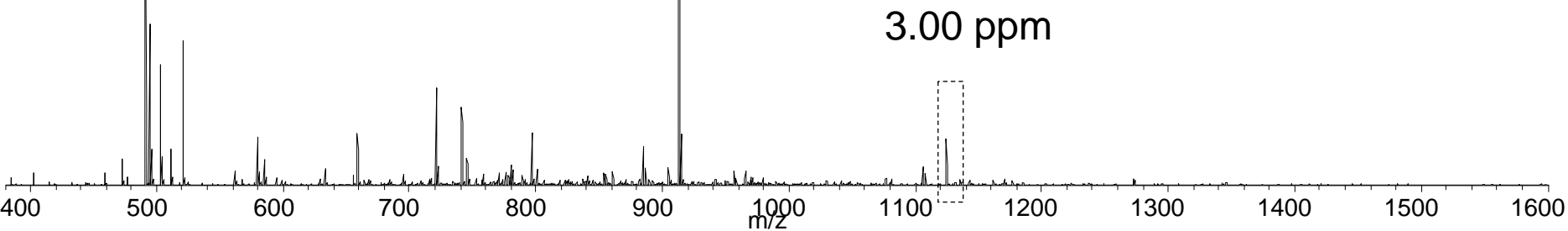
Internal



CV=-25 V

RT: 20.83

External

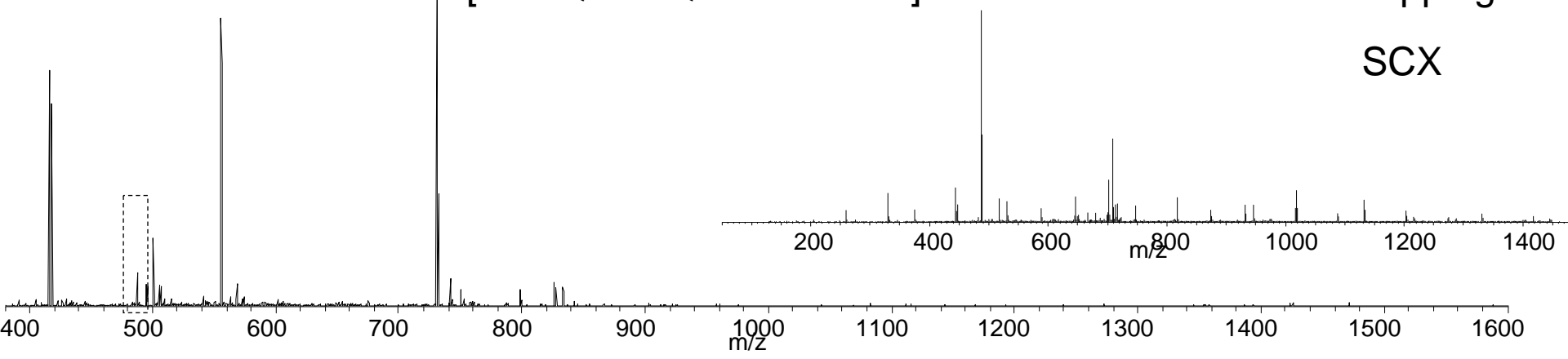


RT: 18.60

[SAAQAAAQTNSNAAGK]³⁺

Supp fig 1h

SCX

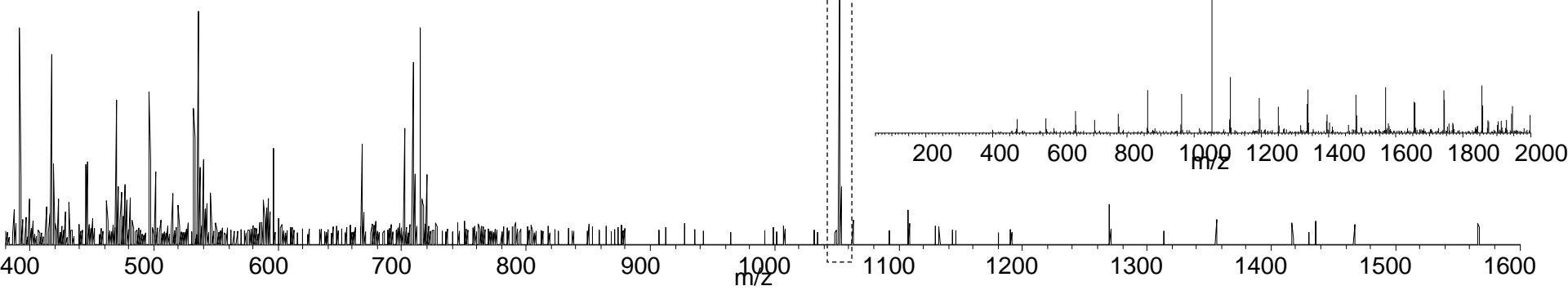


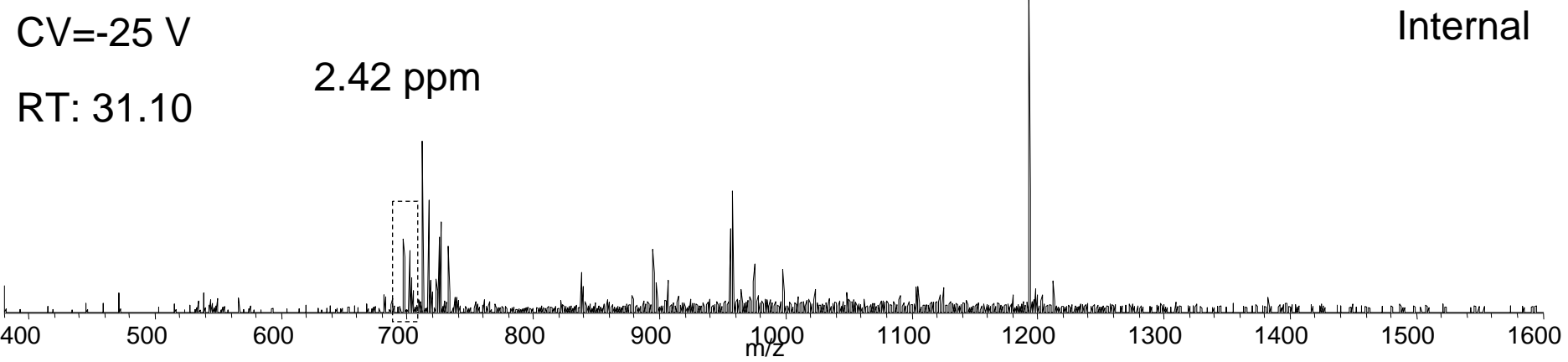
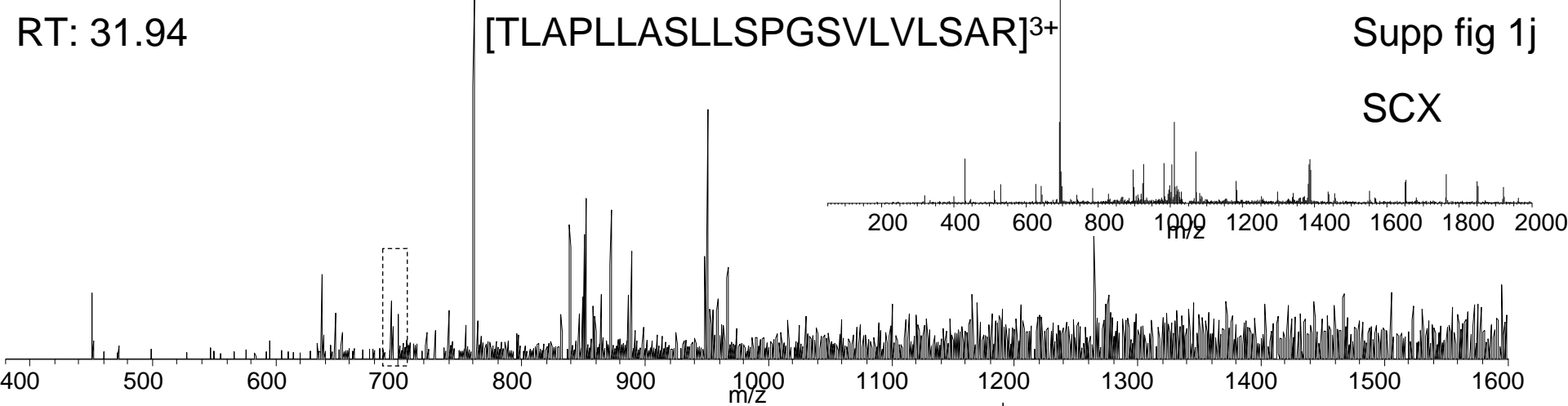
[SSGNSSSSGSGSGSTAGSSSPGAR]²⁺

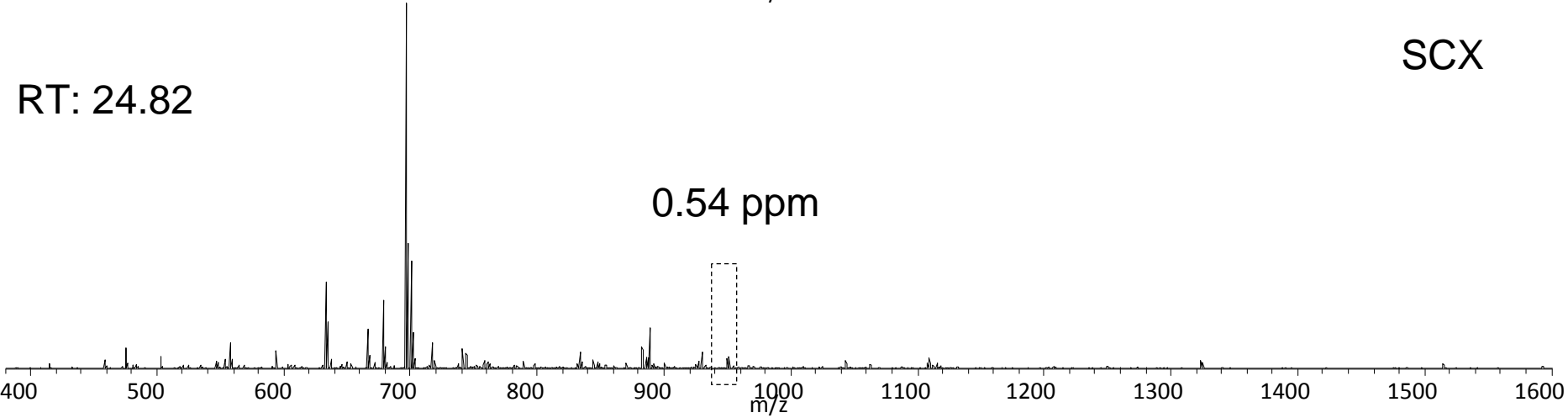
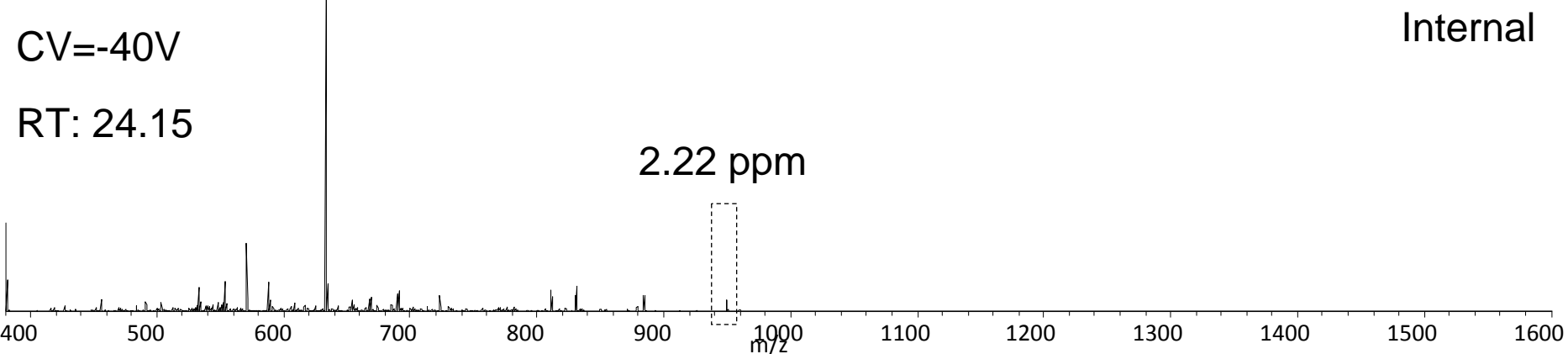
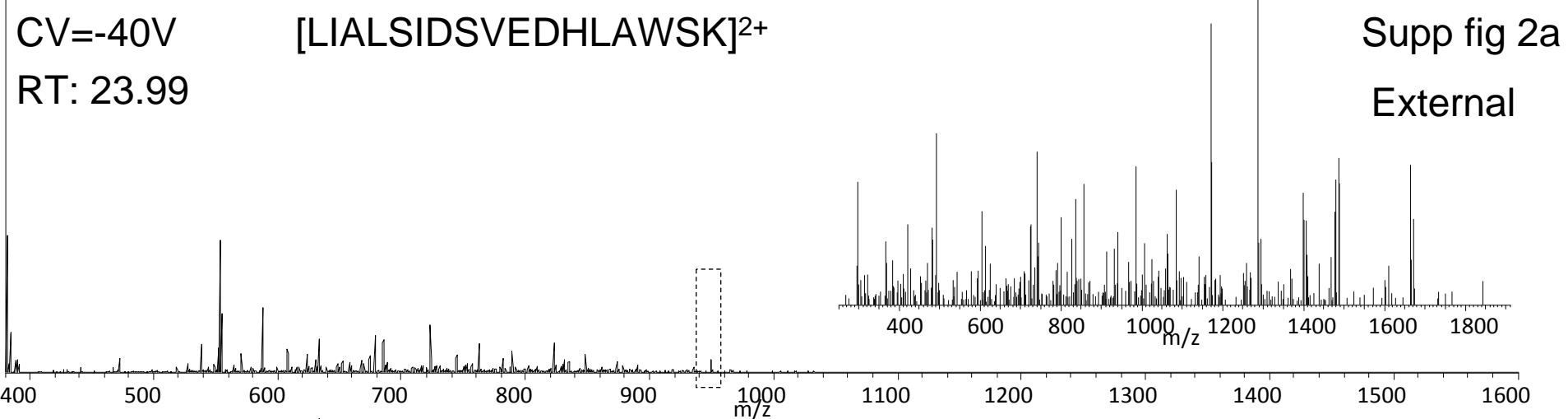
RT: 11.38

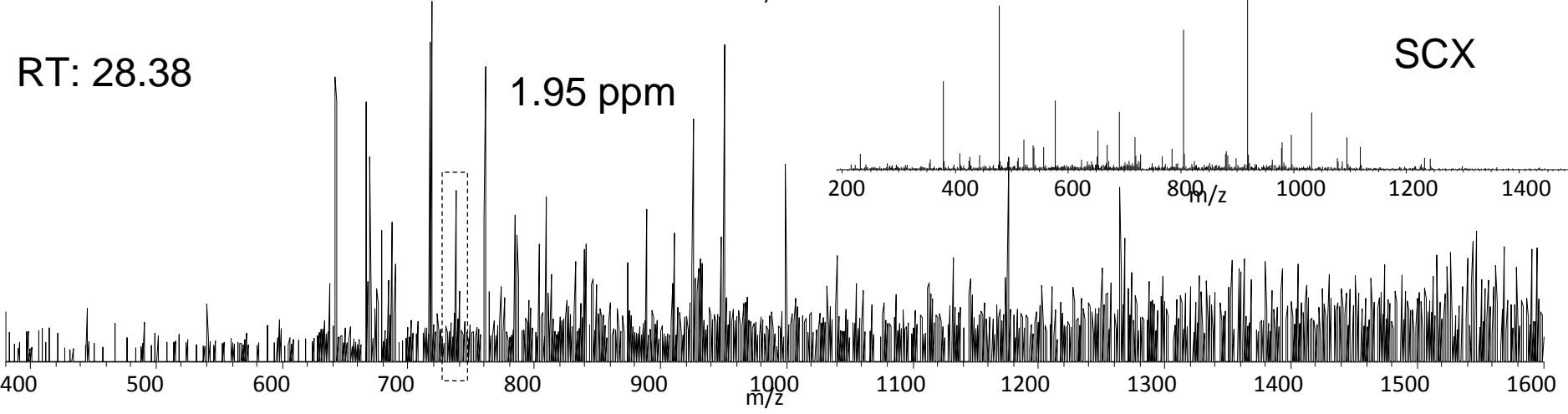
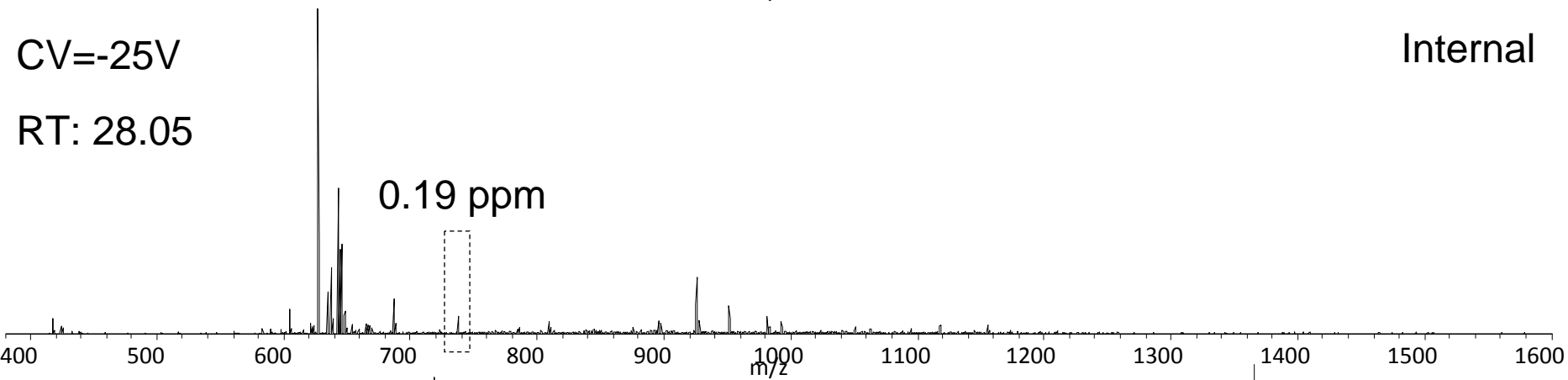
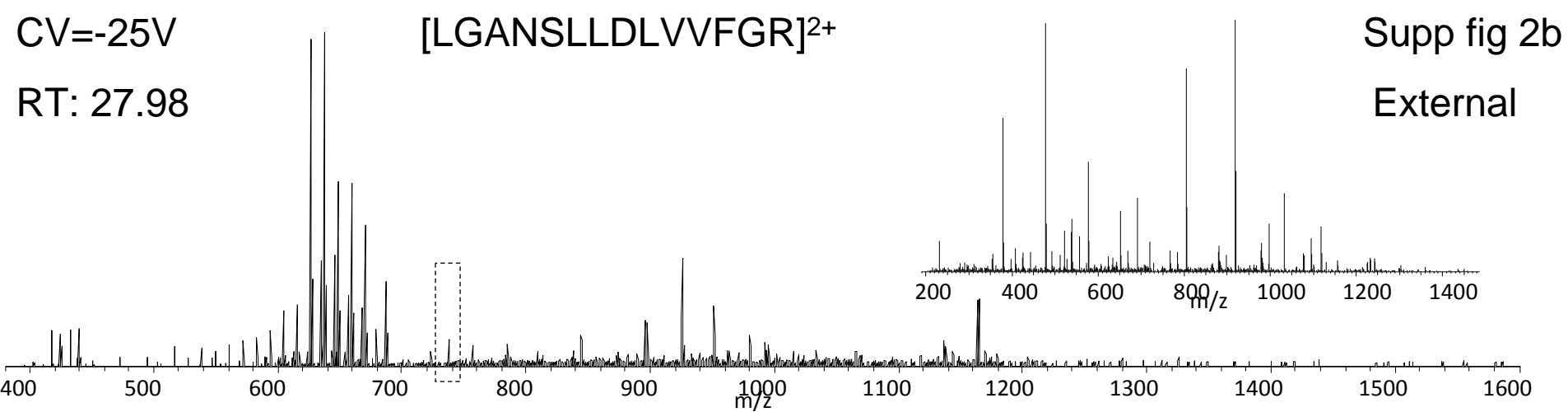
Supp fig 1i

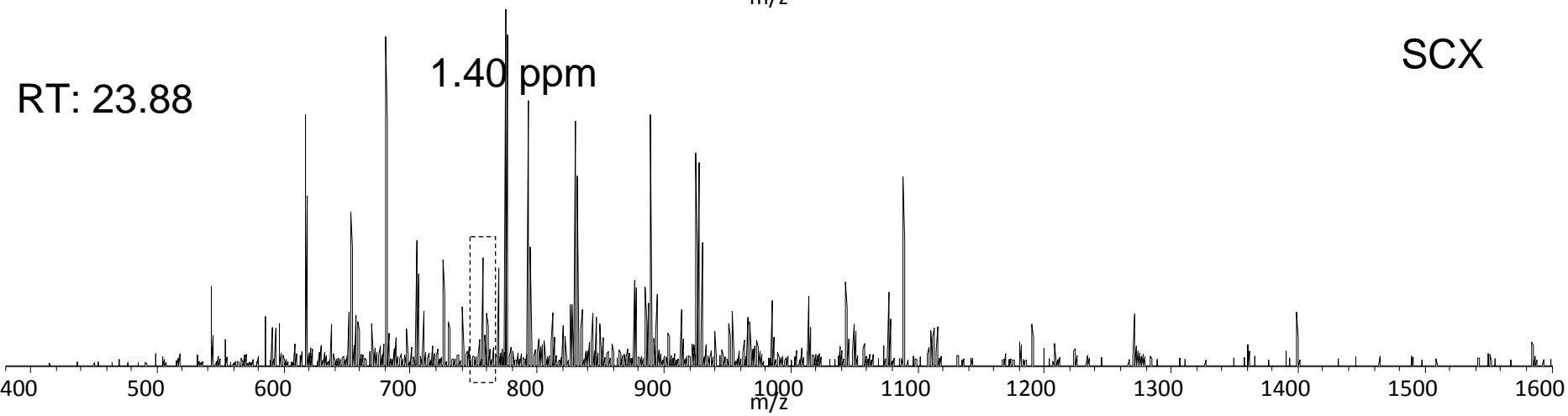
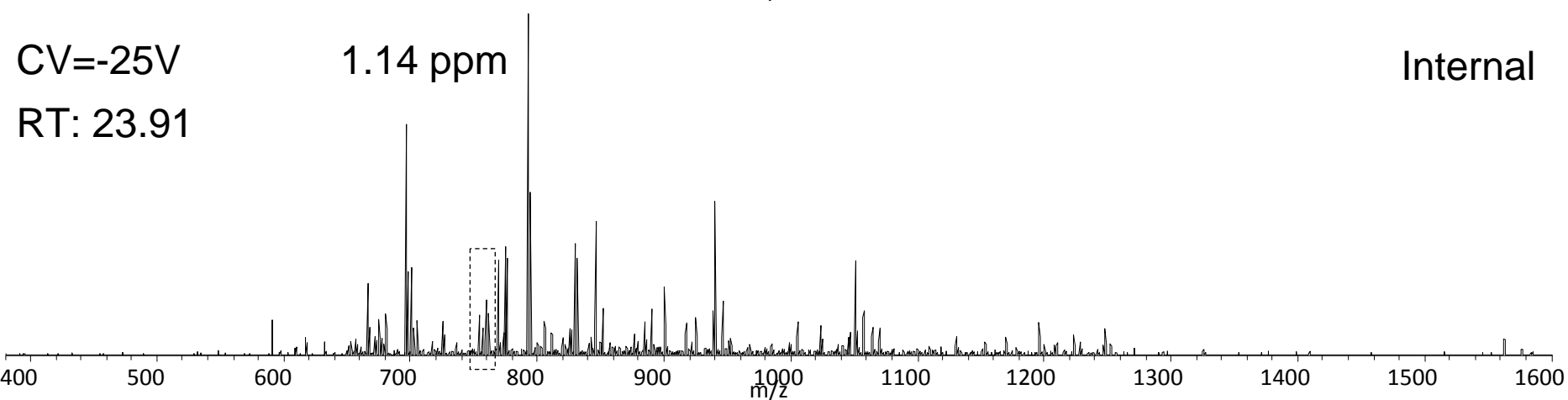
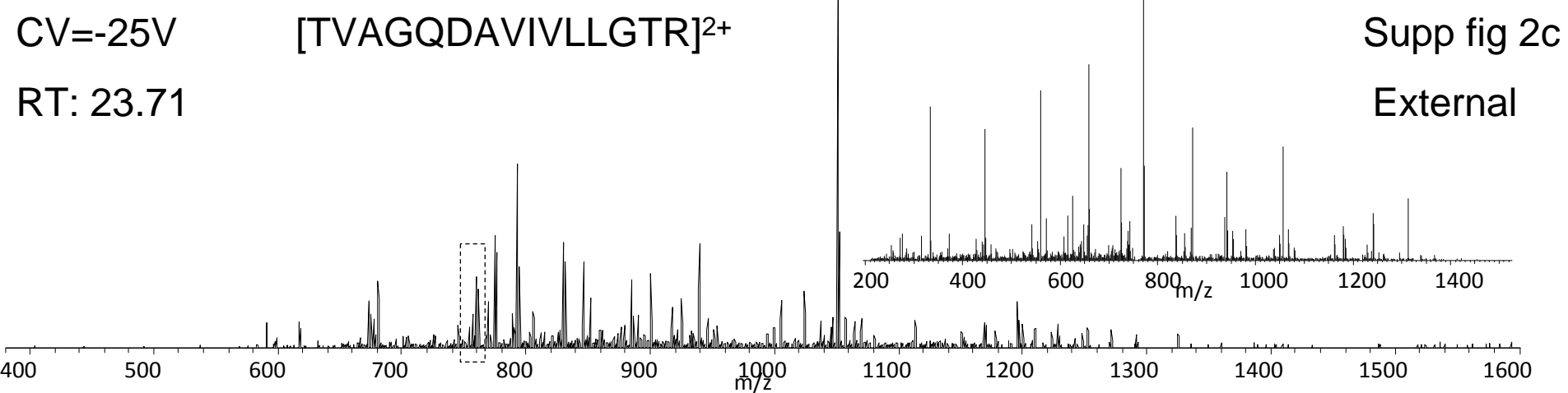
SCX









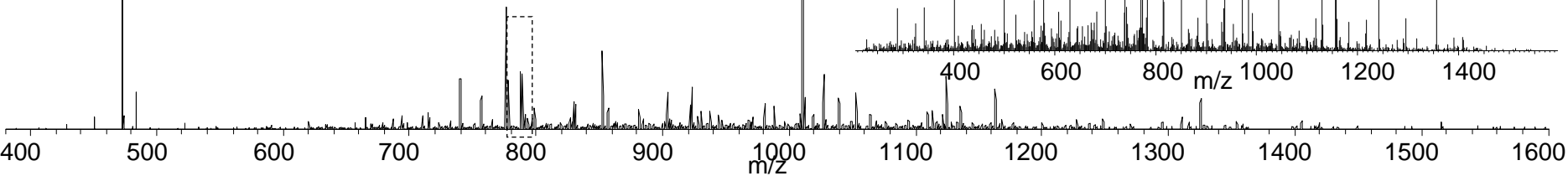


CV=-25V [QVLLSAAEAAEVILR]²⁺

RT: 25.92

Supp fig 2d

External

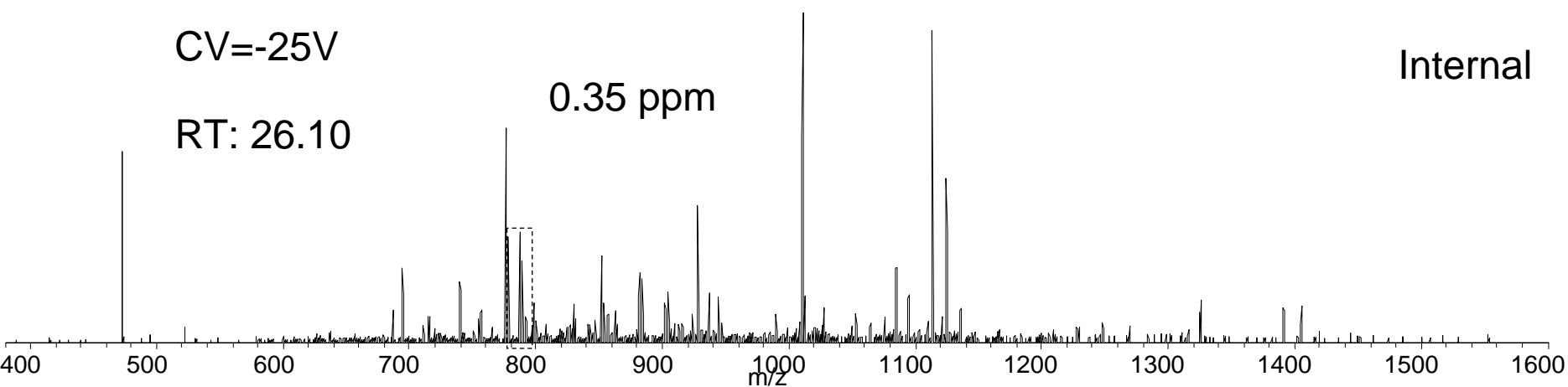


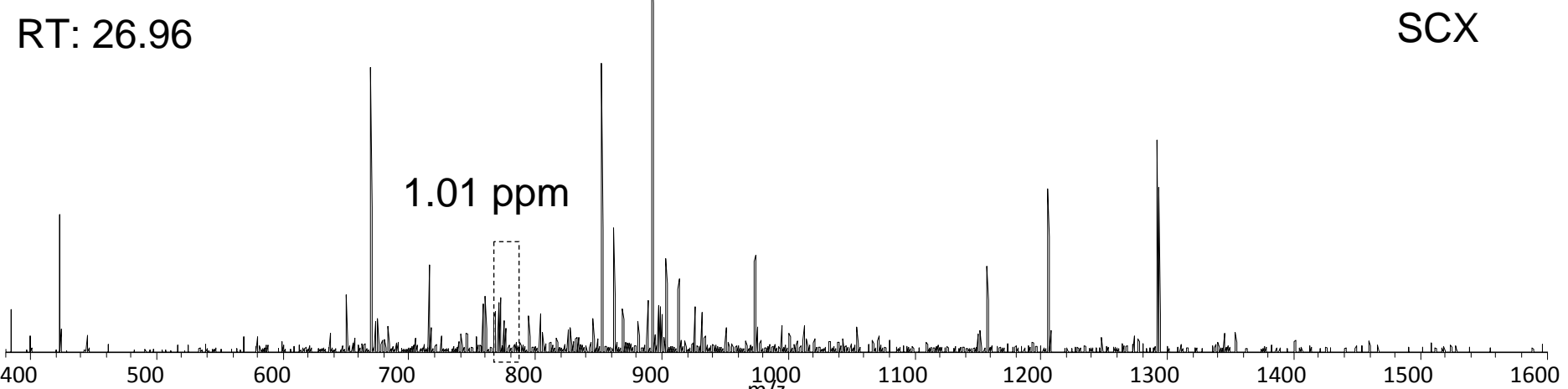
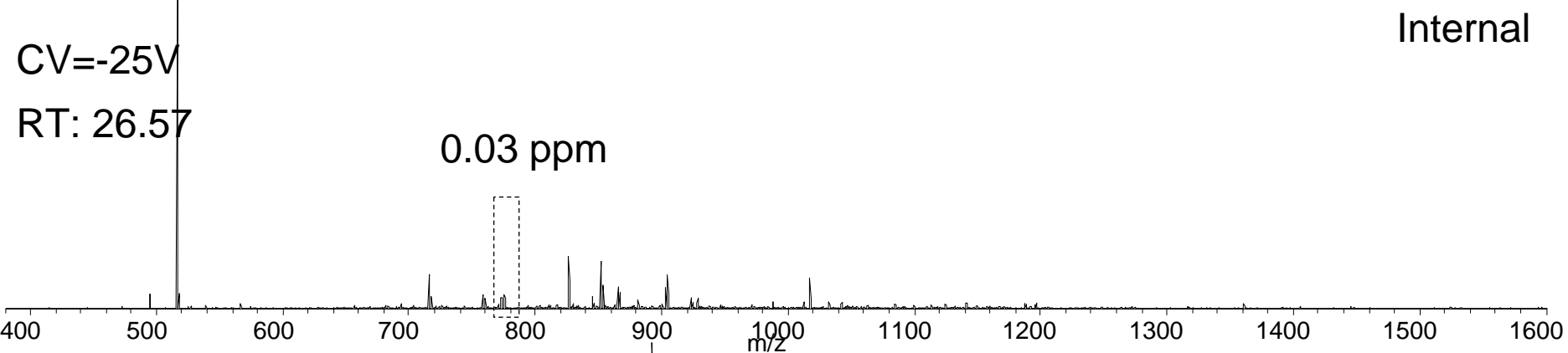
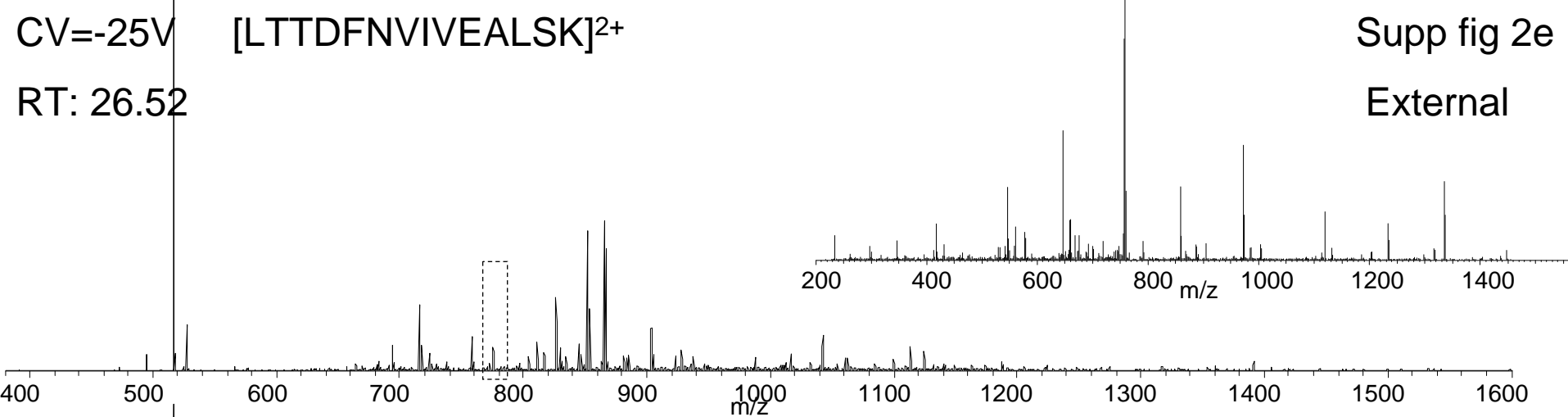
CV=-25V

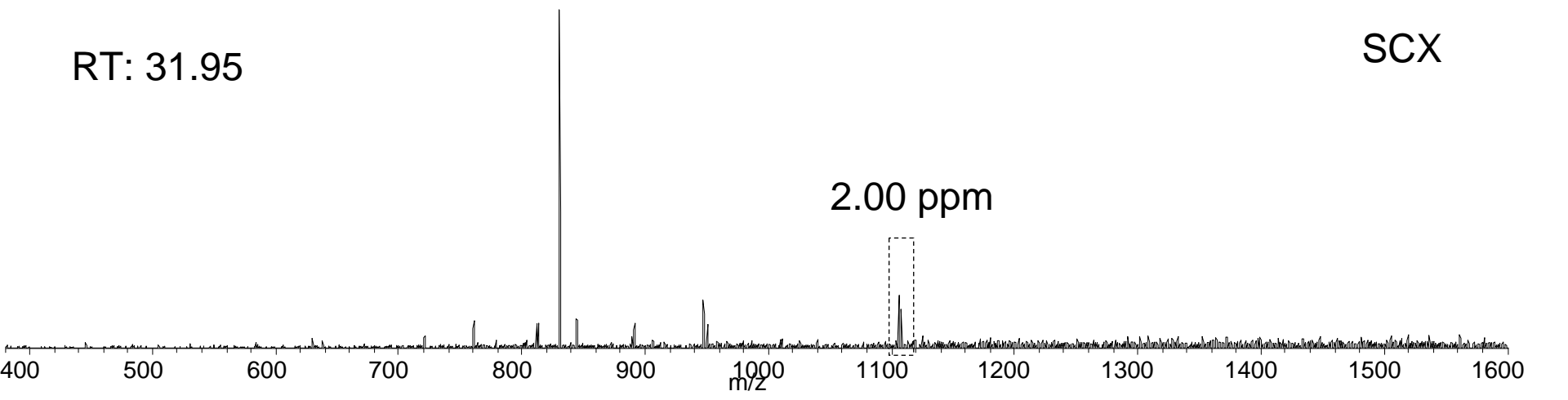
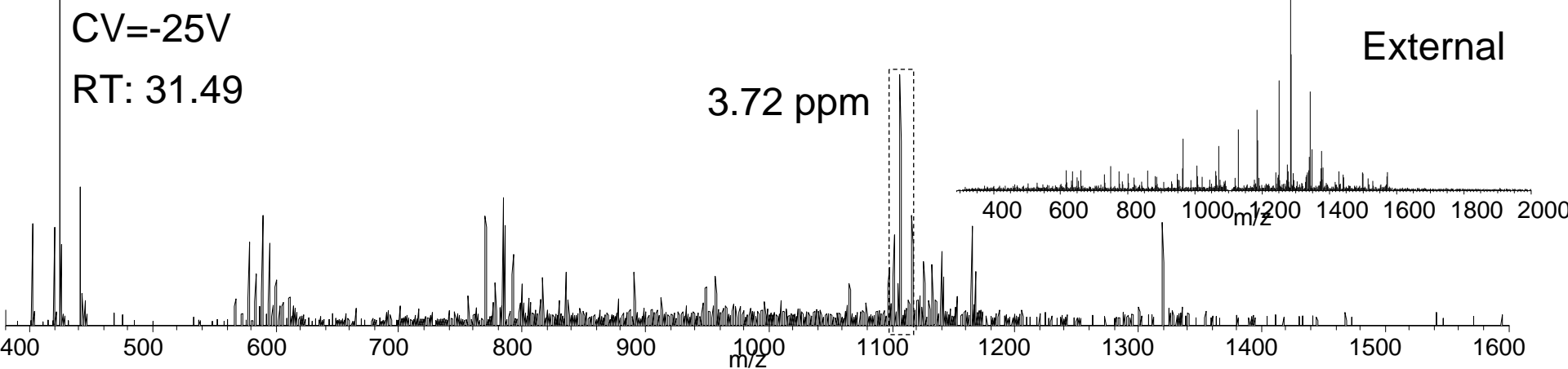
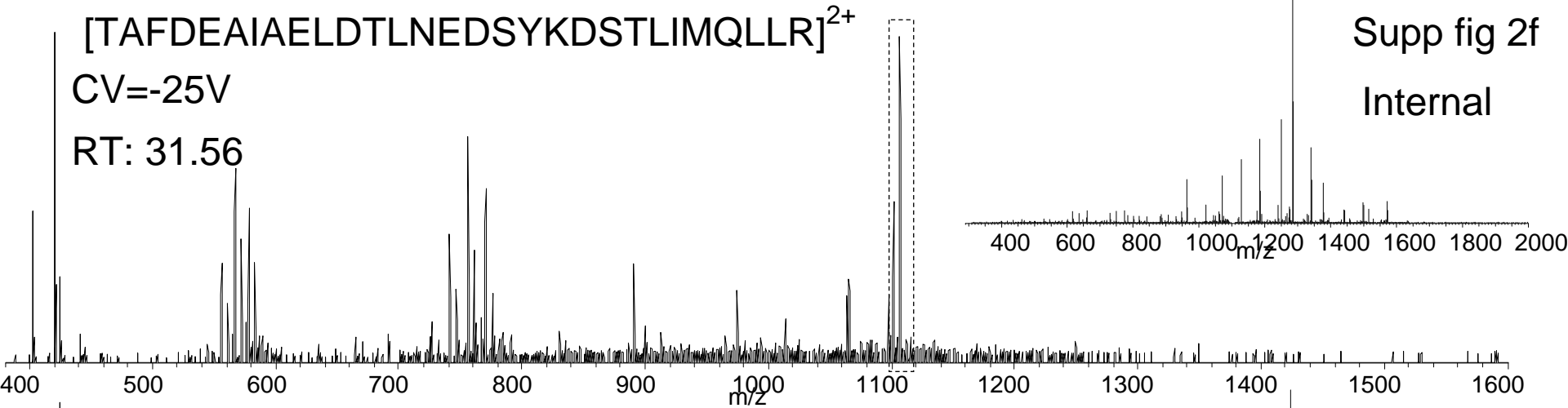
RT: 26.10

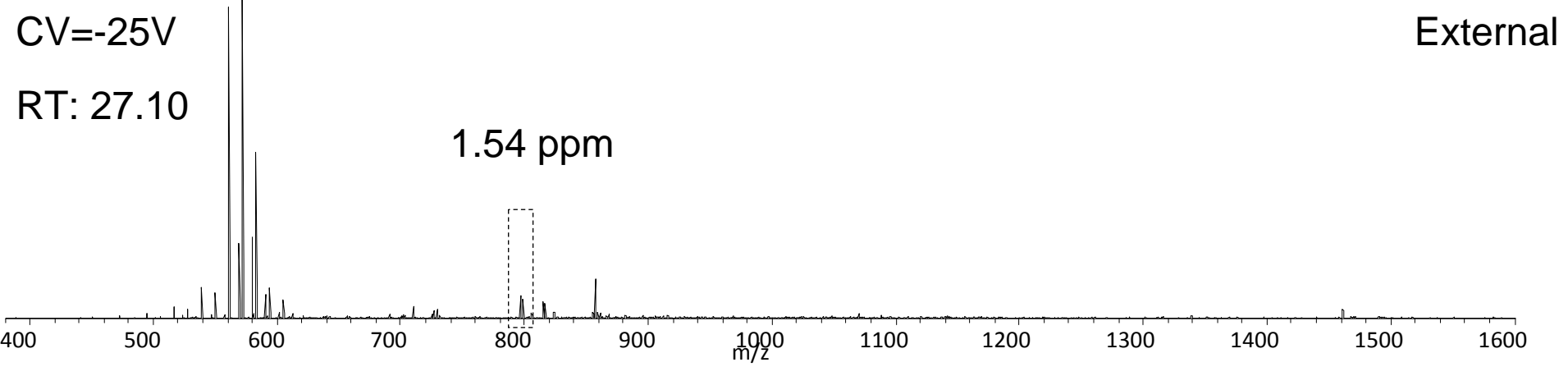
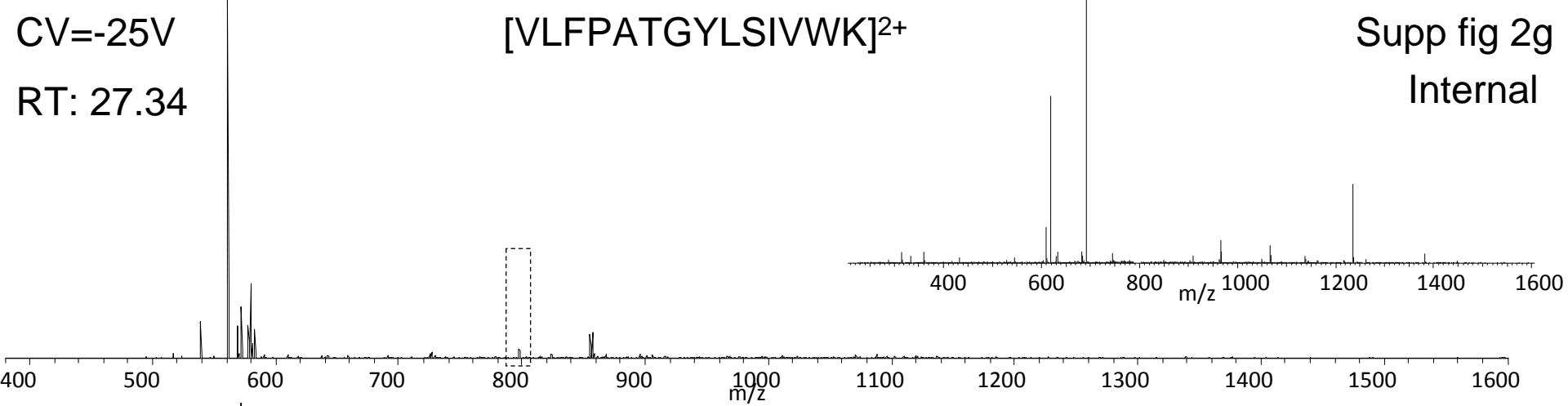
0.35 ppm

Internal







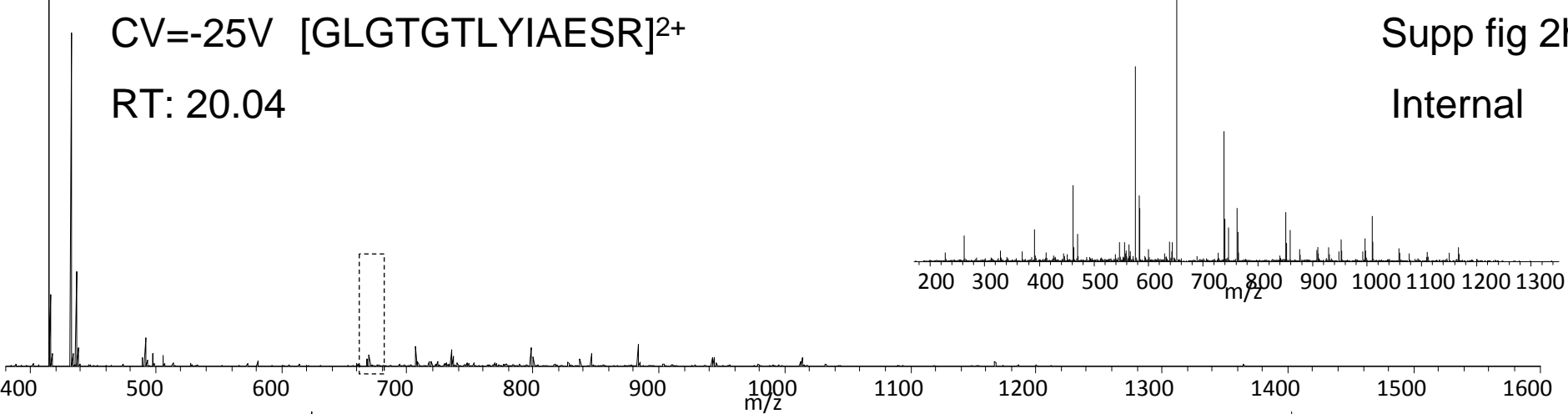


CV=-25V [GLGTGTLYIAESR]²⁺

RT: 20.04

Supp fig 2h

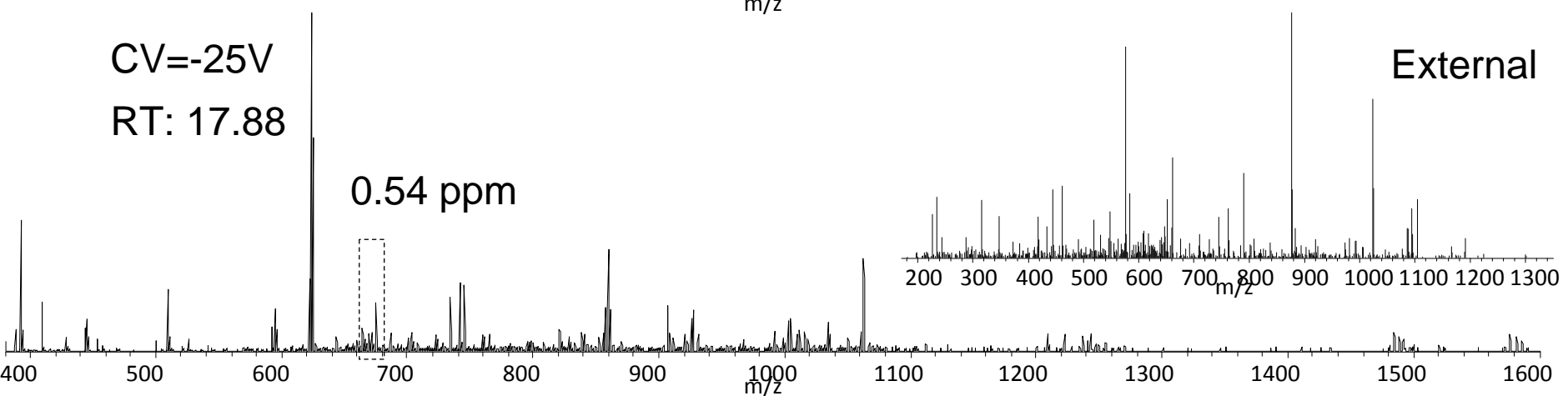
Internal



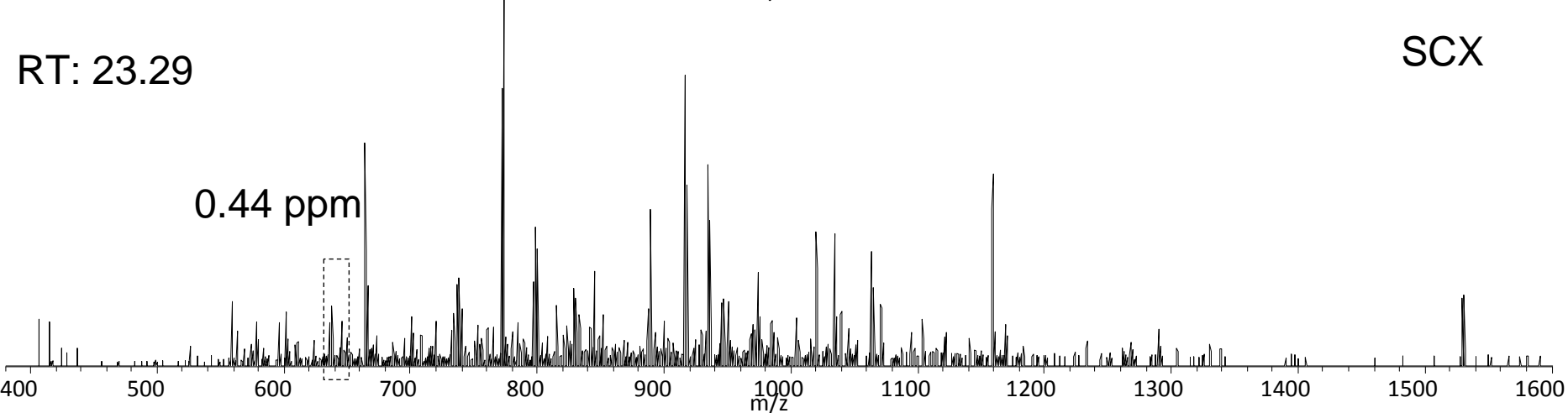
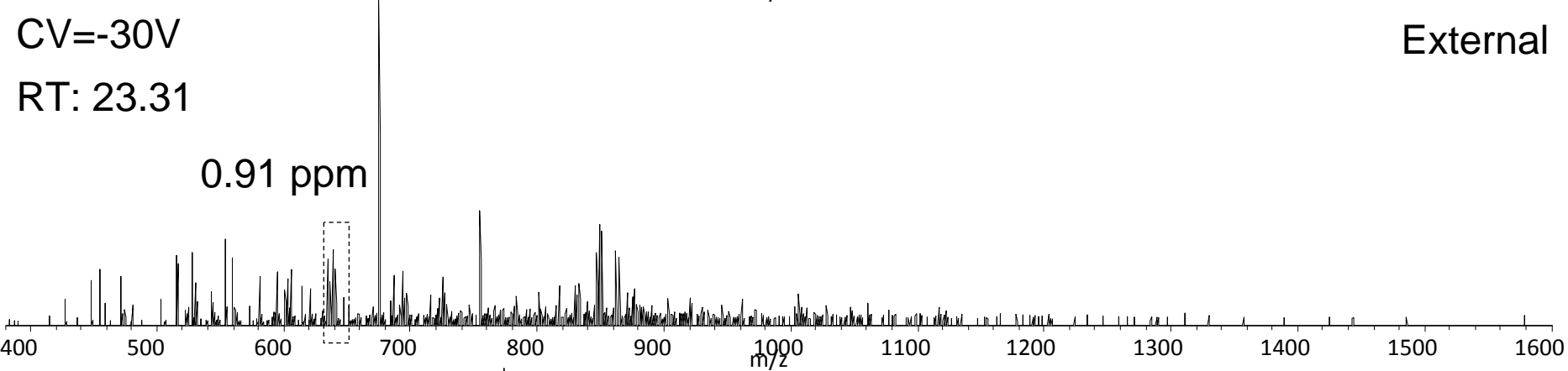
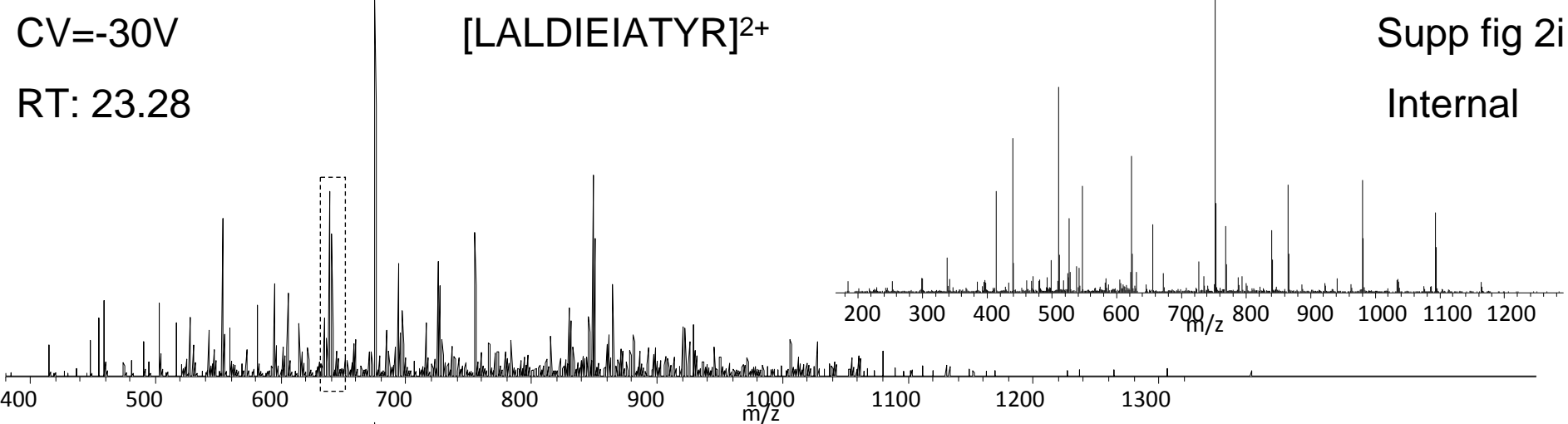
CV=-25V

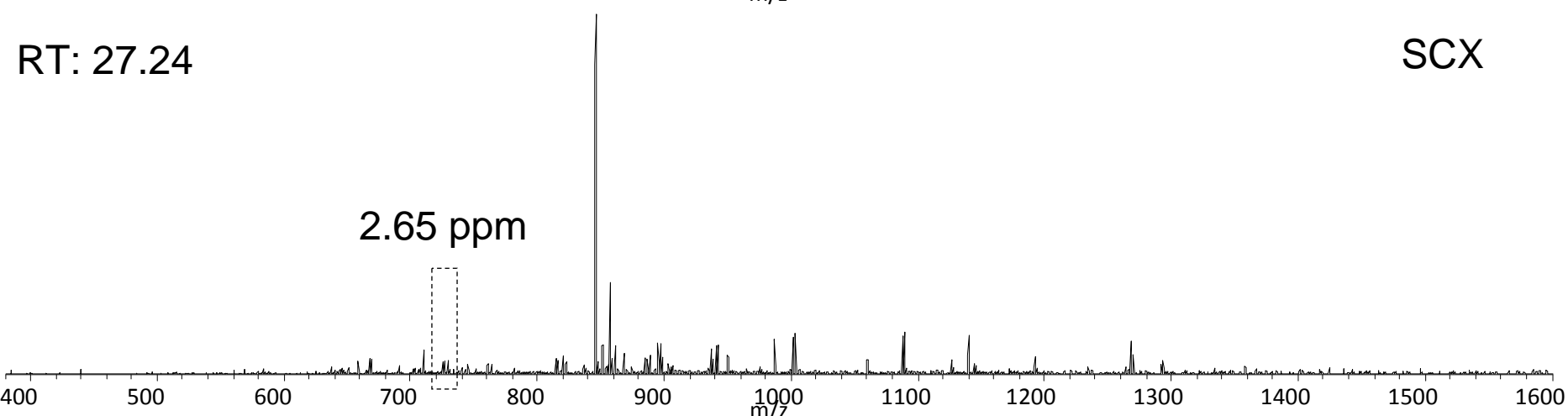
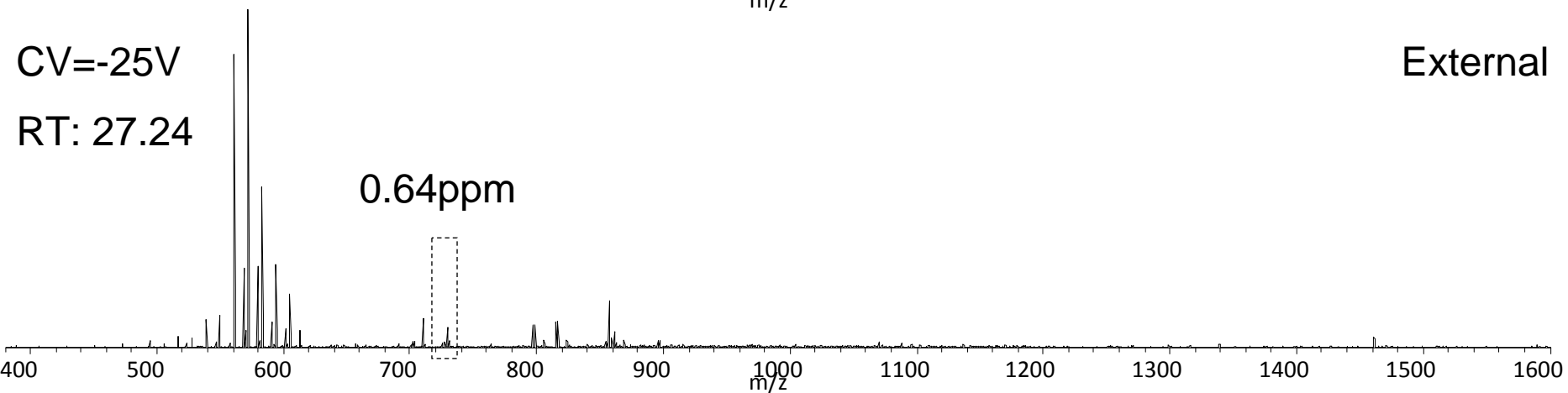
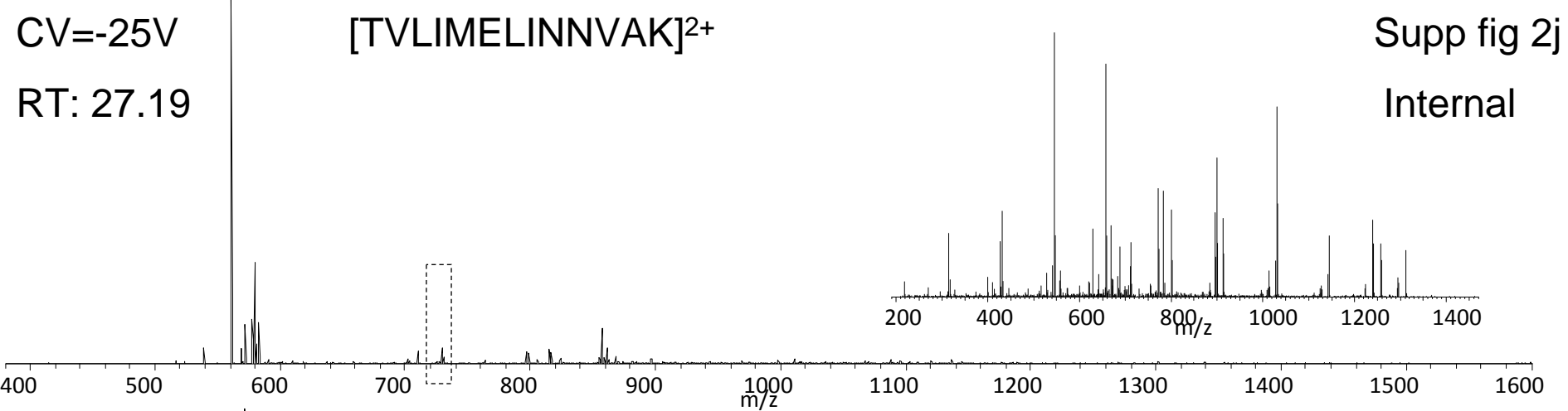
RT: 17.88

External



SCX



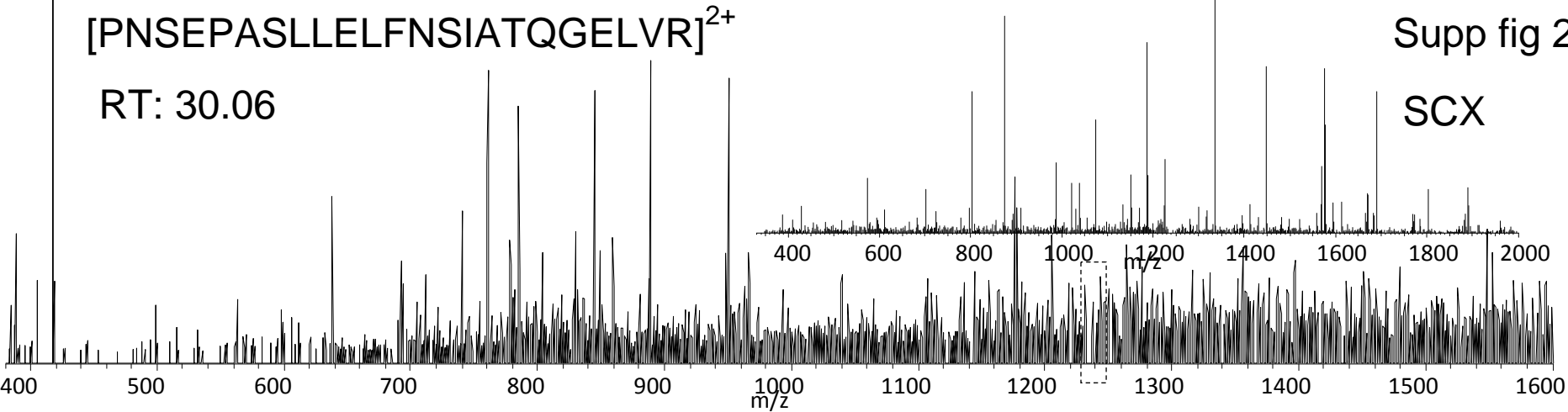


[PNSEPASLLELFNSIATQGELVR]²⁺

RT: 30.06

Supp fig 2k

SCX

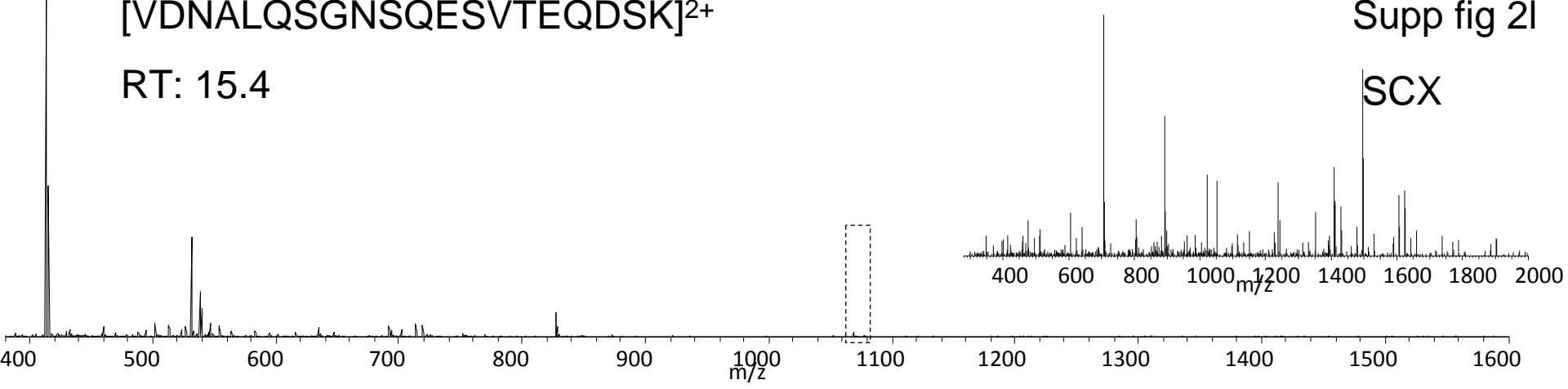


[VDNALQSGNSQESVTEQDSK]²⁺

RT: 15.4

Supp fig 2I

SCX

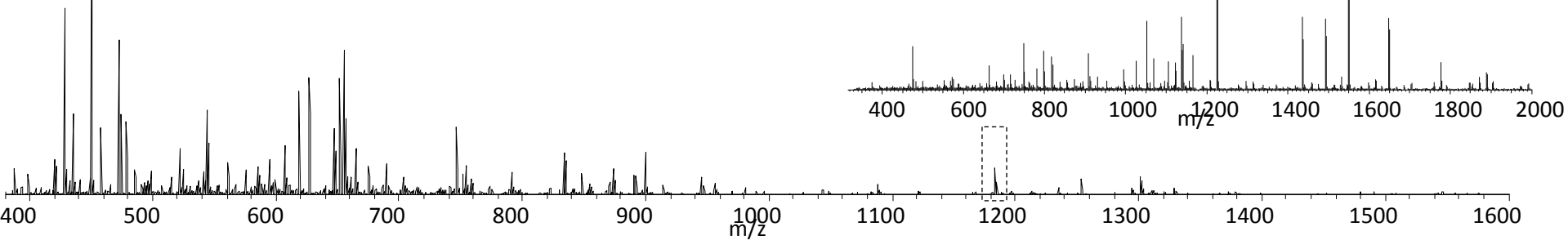


[ASASGSGAQVGGPISSGSSASSVTVTR]²⁺

RT: 17.14

Supp fig 2m

SCX

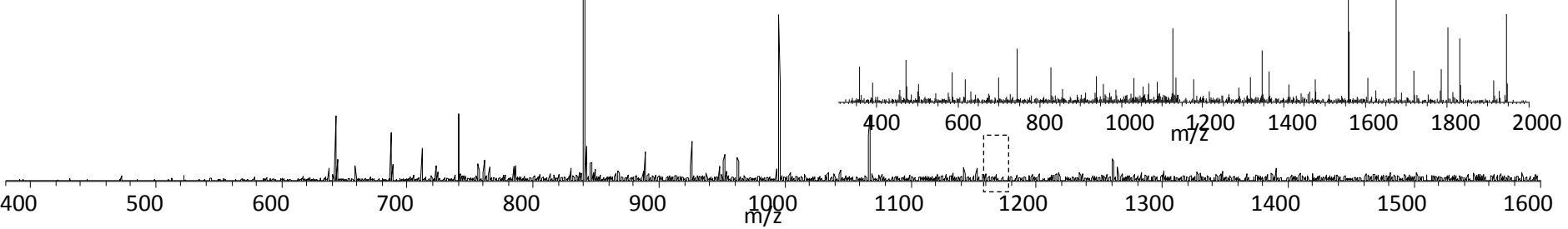


[GLAFIQDPDGYWIEILNPNK]²⁺

RT: 28.21

Supp fig 2n

SCX

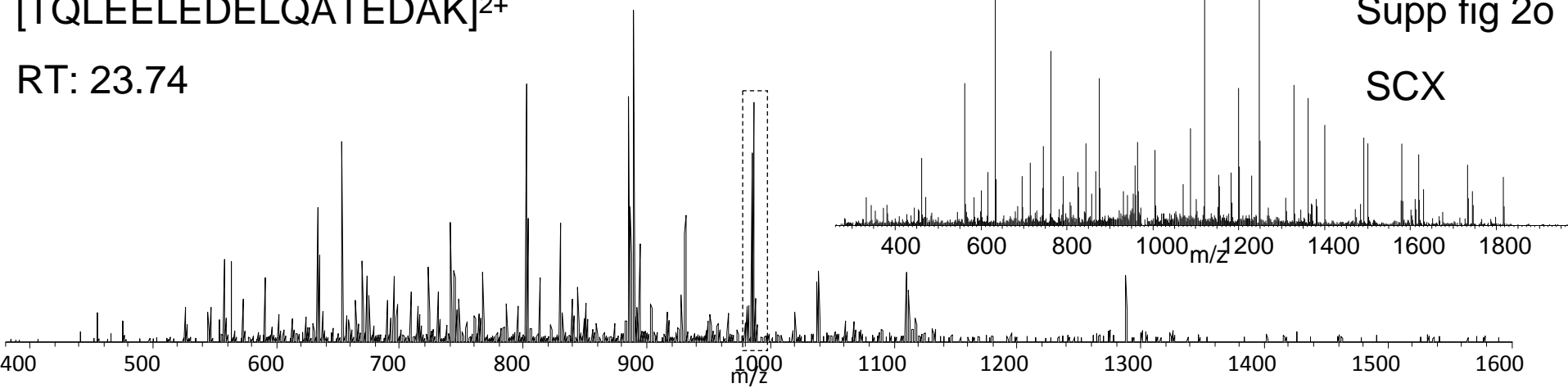


[TQLEELEDELQATEDAK]²⁺

RT: 23.74

Supp fig 2o

SCX



Supplemental Table 1

		CID		
		Internal	External	SCX
Mascot (Exp value)		0.005	0.005	0.02
SEQUEST (Xcorr)	2+	3.7	3.8	4.48
	3+	4.58	4.52	5.25
	4+	4.6	4.52	5.26
	5+	4.7	4.53	5.26
	6+	4.7	4.53	5.27
	7+	4.7	4.54	5.27

		ETD		
		Internal	External	SCX
Mascot (Exp value)		0.005	0.001	0.012
SEQUEST (Xcorr)	2+	2.79	2.66	3.15
	3+	4	3.05	4
	4+	4.3	3.65	4
	5+	4.32	3.8	4
	6+	4.32	4	4
	7+	4.32	4.3	4