Pravastatin in Cell Lysate Samples by LC-MS/MS

ACE® Ultra-inert UHPLC & HPLC Columns

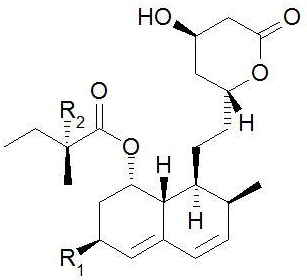
Application #AN4350

Conditions

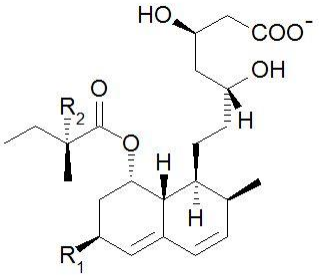
Column: ACE Excel 3 SuperC18
Dimensions: 100 x 3.0 mm
Part Number: EXL-1111-1003U
Mobile Phase: A: 5 mM ammonium acetate pH 4.5 in H_2O
B: MeCN

Time (mins)	%B
0	65
4	65
5	75
7	75
8	65

Flow Rate: 0.3 mL/min
Temperature: 40 °C
Detection: Quattro Ultima triple quad MS
ESI MRM mode: +ve (lactones)
–ve (hydroxy acids)
Source temperature: 125 °C
Desolvation temperature: 350 °C



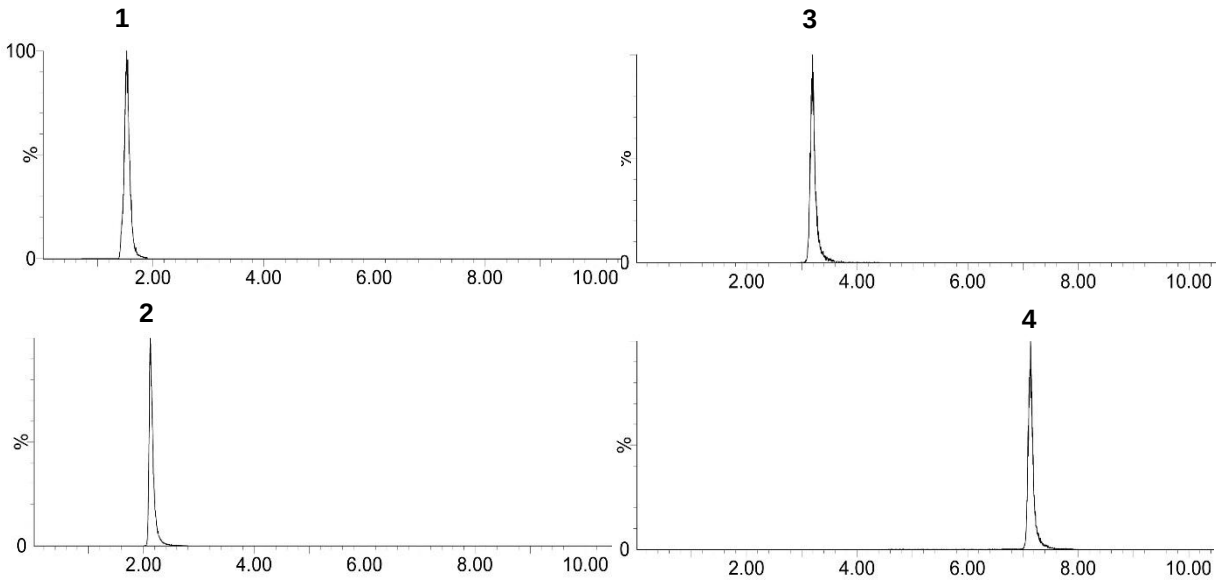
Lactone form
(pharmacologically inactive)



Hydroxy acid form
(pharmacologically active)

Pravastatin: R_1 = OH, R_2 = H
Lovastatin (IS): R_1 = CH_3, R_2 = H

Peak	Analyte	Precursor ion	MRM transition *(m/z)*	LLOQ (ng/mL)
1	Pravastatin hydroxy acid	$[M-H]^-$	423.23 → 321.37	2.23
2	Pravastatin lactone	$[M+H]^+$	407.46 → 183.22	2.03
3	Lovastatin hydroxy acid (IS)	$[M-H]^-$	421.08 → 319.54	n/a
4	Lovastatin lactone (IS)	$[M+Na]^+$	427.15 → 325.36	n/a



Taha DA, de Moor CH, Barrett DA, Lee JB, Gandhi RD, Hoo CW, Gershkovich P, (2016) The role of acid-base imbalance in statin-induced myotoxicity. Translational Research, The Journal of Laboratory and Clinical Medicine. http://dx.doi.org/10.1016/j.trsl.2016.03.015

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