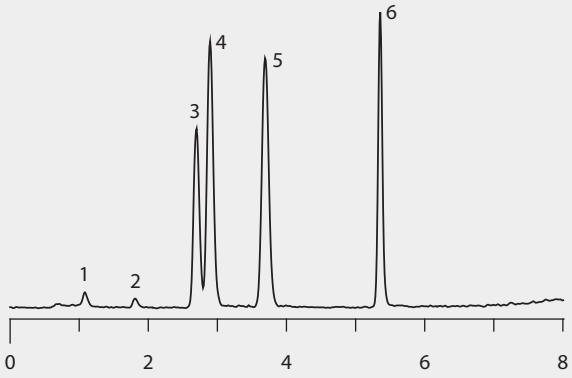
LC/MS/MS Analysis of Steroid Hormones in Plasma on Ascentis® Express C18 after Sample Prep using HybridSPE®-Phospholipid

This application shows the separation of steroid hormones in plasma using LC/MS/MS. HybridSPE-Phospholipid removed endogenous phospholipids and precipitated proteins, thereby allowing rapid, sensitive analysis by LC/MS/MS using an Ascentis Express C18 column. Fluka LC-MS Ultra CHROMASOLV solvents were used to supply low background interference and low particulate contaminants for robust, trouble-free operation. Cerilliant CRMs provided reliable identification and quantification.

market focus	Clinical
SPE tube/cartridge	HybridSPE®-Phospholipid, 96-well plate, 50 mg/well (575656-U)
sample addition	To each well add 100 µL of plasma followed by 300 µL of precipitation solvent (1% formic acid or 0.5% citric acid in acetonitrile). (Agitate via vortex for 4 minute, place on vacuum manifold and apply 10" Hg vacuum for 4 minutes. Collect filtrate and analyze directly.)
column	Ascentis® Express C18, 10 cm x 2.1 mm I.D., 2.7 µm particles (53823-U)
gradient	60% B for 3 min, 60% B to 95% B in 5 min, held at 95% B for 2 min
mobile phase	[A] 5 mM ammonium formate pH 4.0 with formic acid; [B] methanol
flow rate	0.3 mL/min
column temp.	50 °C
detector	ESI+, MRM
injection	2 µL
Application No.	G005895

	MRM Transition
1. Aldosterone	361.0/343.1
2. Corticosterone	347.6/109.0
3. 11-Deoxycorticosterone	331.1/109.0
4. Testosterone	289.0/109.0
5. 17α-Methyltestosterone	303.1/97.0
6. Progesterone	315.0/109.1



Related Products

analytical column
Ascentis® Express C18, 2.7 Micron HPLC Column (Supelco 53823-U)
mobile phase component
Ammonium formate (Fluka 14266)
Formic acid (Fluka 14265)
Methanol (Fluka 14262)
Water (Fluka 14263)
SPE tube or plate
HybridSPE®-Phospholipid (Supelco 575656-U)
standard
Aldosterone solution (Cerilliant A-096)
Corticosterone solution (Cerilliant C-117)
17α-Methyltestosterone solution (Cerilliant M-906)
Progesterone solution (Cerilliant P-069)
Testosterone solution (Cerilliant T-037)