

ARK™ Oxcarbazepine Metabolite Assay

Specialty Diagnostix and ARK Diagnostics introduce the first homogeneous immunoassay for the Therapeutic Drug Monitoring of the Oxcarbazepine Metabolite 10,11-dihydro-10-hydroxy-5H-dibenz[b,f]azepine-5-carboxamide (or 10-Monohydroxy derivative [MHD] of Oxcarbazepine) in human serum. The ARK™ Oxcarbazepine Metabolite Assay provides a fast, sensitive and convenient alternative to the more time-consuming chromatographic methods.

Assay Characteristics

- Convenient and simple method for the monitoring of Oxcarbazepine Metabolite
- Excellent precision and recovery
- Highly specific and sensitive assay for the detection of Oxcarbazepine Metabolite even in trough level concentrations
- No cross-reactivity with structurally unrelated AEDs
- No time-consuming sample preparation and extraction
- Liquid, stable, ready-to-use reagent, calibrators and controls
- Application protocols for all major clinical chemistry analyzers

Background

Oxcarbazepine and Eslicarbazepin acetate are next generation anti-convulsant and mood-stabilizing agents. Both are so called prodrugs that are metabolized to the active, clinically relevant metabolite MHD.

The chemical structure and therapeutic activity of Oxcarbazepine are similar to Carbamazepine, but it has a considerably reduced potential for negative side effects. Oxcarbazepine is used in the treatment of epilepsy, anxiety and mood disorders as well as benign motor tics. In addition, it seems to be effective in patients with bipolar disorders.

Serum concentrations of 3 to 35 µg/mL of the active Oxcarbazepine Metabolite are associated with a clinically effective control of partial seizures. Adverse effects may occur at concentrations exceeding 35 µg/mL.

Therapeutic Drug Monitoring is justified when changes are expected that might alter the clearance of the Oxcarbazepine Metabolite.

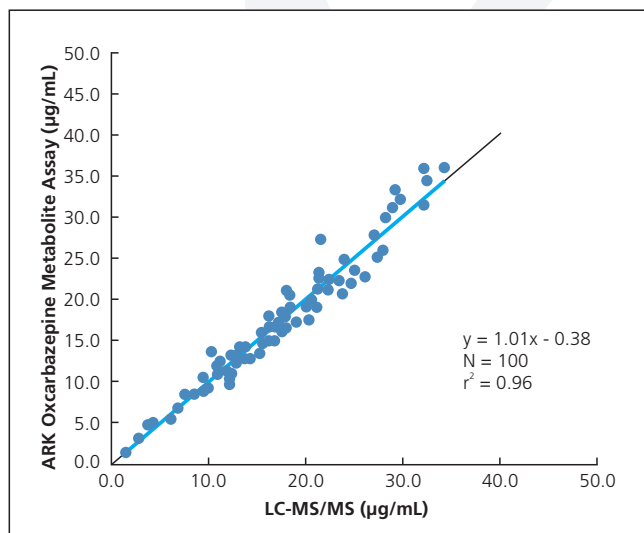
These may include pregnancy, the concomitant use of liver enzyme inducing medication or renal insufficiency.

Cross-Reactivities

Compound	Concentration Tested (µg/mL)	Cross-Reactivity (%)
Carbamazepine	20.0	20.4
Carbamazepine-Epoxyde	10.0	13.6
Dihydro-Carbamazepine	5.0	6.0
Dihydro-Dihydroxy-Carbamazepine	5.0	-11.3
Eslicarbazepine Acetate	20.0	22.1
Oxcarbazepine	20.0	22.2

Method Comparison

One hundred (100) human serum samples from patients treated with oxcarbazepine were analyzed with the ARK Oxcarbazepine Metabolite Assay. The results were compared with results from a LC-MS/MS method.



Ordering Information

Reagent	Size	Order No.
ARK™ Oxcarbazepine Metabolite Assay	28 mL R1 & 14 mL R2	5032-0001-00
Calibrator		
ARK™ Oxcarbazepine Metabolite Calibrator	1 x 4 mL, 5 x 2 mL	5032-0002-00
Control		
ARK™ Oxcarbazepine Metabolite Control	3 x 4 mL (LOW, MID, HIGH)	5032-0003-00

Specialty  Diagnostix

Specialty Diagnostix GmbH
 Sailerwöhr 16
 94032 Passau, Deutschland
 Telefon +49 (0)851 988 4930 0
 Telefax +49 (0)851 988 4930 8
 info@specialtydiagnostix.de
 www.specialtydiagnostix.de