

# Levetiracetam

## Synonyms

Keppra

## Clinical Indication

Monitoring patients on levetiracetam.

Levetiracetam is an anti-epileptic drug used in the treatment of focal seizures, myoclonic and tonic-clonic seizures. The role of therapeutic drug monitoring for levetiracetam has not yet been established. Nevertheless, its use in ascertaining compliance and managing patients that are overdosed is helpful. Because Levetiracetam has a relatively short half-life, sampling time in relation to dose ingestion is important for the interpretation of drug concentration. Ideally, samples for levetiracetam measurements should be drawn before the morning dose.

## Part of Profile / See Also

### Request Form

Combined Pathology manual Blood form or ICE request

### Availability / Frequency of Analysis

Referred Test: Analysed by TDM Unit, Chalfont Centre for Epilepsy [8353](#), if specific criteria met.

### Turnaround Time

2 weeks

### Patient Preparation

Samples should be collected before next dose (trough)

### Sample Requirements

#### Specimen Type

Serum/lithium heparin plasma

#### Volume

1 ml

#### Container



yellow top (SST)



Paediatric lithium heparin (Orange top – Sarstedt)



Paediatric lithium heparin (Pale green top BD Microtainer)

### Reference Range & Units

12 – 46 mg/L

### Interferences

Enzyme inducing AEDs can moderately decrease serum levetiracetam concentrations

### Interpretation & Clinical

Dependent on sampling time in relation to dose ingestion and concomitant medication.

**Decision Value (if applicable)**

**References**

Patsalos, P (2008) Antiepileptic drugs – best practice guidelines for therapeutic drug monitoring: A position paper by the subcommission on therapeutic drug monitoring, ILAE Commission on Therapeutic Strategies. *Epilepsia* **49**:7 1239 – 1276  
<https://bnf.nice.org.uk/drug/levetiracetam.html>

**Test code**

LEVE

**Lab Handling**

Centrifuge ASAP, aliquot 500ul and store in referrals rack at 4C. Sent daily by first class post to TDM Unit, Chalfont Centre (UCLH).

