



Tryptase

Synonyms

Mast cell tryptase, MCT, [adverse drug reaction](#)

Clinical Indication

Tryptase is a marker of mast-cell degranulation.

Transient raised tryptase is seen within minutes of acute systemic [hypersensitivity reactions e.g. anaphylaxis](#).

Plasma tryptase levels are also useful in diagnosis and monitoring of urticaria pigmentosa (cutaneous mastocytosis) and systemic mastocytosis.

Tryptase levels are indicated in anyone who presents with rapidly developing life-threatening problems involving: the airway (pharyngeal or laryngeal oedema) and/or breathing (bronchospasm with tachypnoea) and/or circulation (hypotension and/or tachycardia) and in most cases associated skin and mucosal changes should be classed as “suspected anaphylactic reaction” or “suspected anaphylaxis”.

To investigate anaphylaxis tryptase samples should be taken as soon as possible after suspected reaction with a second sample taken 1-4 h post onset of symptoms and a baseline/resting state sample taken after at least 24 h (NICE guidelines CC134)

Part of Profile / See Also

Adverse Drug Reaction

Request Form

Combined Pathology manual Blood form or ICE request

For suspected anaphylaxis reaction full details should include complete patient ID; date & time of reaction; surgical procedure; all drugs administered; clinical signs and outcome; previous history; any risk factors.

Availability / Frequency of Analysis

On request. Please note that without samples collected at the appropriate time points and without the clinical information and timings it may not be possible to interpret the results.

Turnaround Time

One week

Patient Preparation

For suspected anaphylactic reactions in adults blood taken within 60 minutes of suspected reaction, then [approx. 3h](#) and 24 hours post reaction; duplicate samples should be collected for FBC.

Sample Requirements

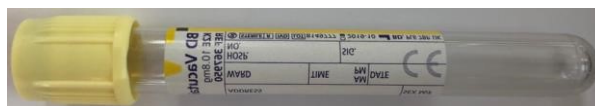
Specimen Type

Plasma

Volume

2 ml (600µL in paediatric tubes)

Container



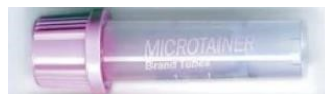
Lemon-top (EDTA) tube.

Or



Purple-top (EDTA) tube

Paediatric tubes



SUH Lavender-top (EDTA) tube

Or



BTUH Red-top (EDTA) tube

Plain serum or lithium heparin tubes may also be used

Reference Range & Units

Basal levels are in the range 2.0 - 14.0 µg/L

Interferences

Interpretation & Clinical

Decision Value (if applicable)

A **bespoke** interpretive comment may be added to the report.

But in general:

Raised serum tryptase concentration would be consistent with a Type 1 hypersensitivity "anaphylactic" reaction but the results must be interpreted in the context of the time of any reaction, the course of the reaction, and any fluids that may have been used during resuscitation.

References

Test code

TRYP

Lab Handling

Samples should ideally be processed at the ESLs. Centrifuge EDTA (or SST or lithium heparin), aliquot at least 0.5ml and store at -20C. Ensure sample type is written on all aliquots. *Note: tryptase is stable for up to one week at 2-8 degrees but it is preferable to freeze the aliquots to safeguard stability.* **Note, although EDTA plasma is the preferred sample type for tryptase analysis, serum and lithium heparin can also be used therefore do not reject requests using these sample types.**