

**Interleukin 1 receptor associated kinase 4 (IRAK4) deficiency** **OMIM: 607676**  
**Gene: IRAK4** **Locus: 12q12** **OMIM: 606883**

**SERVICE:** mutation analysis of IRAK4 gene

**TESTING:** **Diagnostic\*:** clinically affected patients  
**Carrier:** relatives of clinically affected patients (known mutations)  
\*samples will only be accepted with a completed 'testing criteria' form (see attached)

**REFERRALS:** **Immunologists only**  
The laboratory does NOT accept referrals directly from patients

## TARGET REPORTING TIME AND COSTS

(Non UK National Health Service patients are subject to a surcharge. Payment must be agreed prior to testing – please include invoice form A)

<b>Diagnostic:</b>	<b>8 weeks</b>	<b>£295</b>
<b>Carrier:</b>	<b>2 weeks</b>	<b>£145</b>

## TECHNICAL INFORMATION

- PCR and fluorescent sequence analysis of exons 2-12 of the IRAK4 gene

## SAMPLE REQUIREMENTS

- 50ul DNA (concentration ~500ng/ul)
- All patient samples must be labelled with **name, date of birth and Hospital/NHS number**
- Samples should be accompanied by a FULLY completed request card (available from the laboratory)
- Please include details of test, family history, patient address & postcode, GP, referring clinician and unit/hospital
- **Samples and paperwork must include three unique and matching patient identifiers**

## SHIPPING DETAILS

- DNA can be sent by first class post
- For immunological studies, blood (5ml in EDTA) should be sent to Dr Rainer Doffinger, Immunology Dept, Box 109, Addenbrooke's Hospital, Cambridge CB2 0QQ (email: rainer.doffinger@addenbrookes.nhs.uk)
- Blood samples must be appropriately packaged and preferably sent by courier to arrive as soon as possible. Do not freeze prior or during postage.

## CONSENT

It is the responsibility of the referring clinician to ensure consent has been obtained for:

- testing and storage
- the use of the sample and the information generated from it to be shared with members of the patients family and their health professionals

After testing, part of this sample might be used anonymously for the development of new tests and to monitor the quality of laboratory results.

## CONTACT DETAILS

Genetics Laboratories, Box 143  
Level 6, Addenbrooke's Treatment Centre  
Addenbrooke's Hospital  
Cambridge CB2 0QQ  
Tel: +44 (0) 1223 348866  
Fax: +44 (0) 1223 348870  
Email: [becky.treacy@addenbrookes.nhs.uk](mailto:becky.treacy@addenbrookes.nhs.uk)

Website: [www.cuh.org.uk/genetics-labs](http://www.cuh.org.uk/genetics-labs)



**Accredited Medical Laboratory**  
Reference No: 1275

## UKGTN testing criteria

UK Genetic Testing Network

<b>Name of Disease:</b>	<b>IRAK4 deficiency</b>
<b>Name of Gene:</b>	<b>Interleukin 1 Receptor Associated kinase 4</b>

<b>Patient name:</b>	<b>Date of birth:</b>
<b>Patient postcode:</b>	<b>NHS number:</b>
<b>Name of referrer:</b>	
<b>Title/Position:</b>	
<b>Department/Hospital:</b>	
<b>Contact email/telephone number:</b>	

**Referrals will only be accepted from one of the following:**  
(Please indicate with a tick which category refers to the referrer).

Referrer	Tick if this refers to you.
<b>Consultant Immunologist</b>	<input type="checkbox"/>

If immunological studies are required, please contact Dr Rainer Doffinger, Immunology Dept, Box 109, Addenbrooke's Hospital, Cambridge CB2 0QQ (email: rainer.doffinger@addenbrookes.nhs.uk)

**Minimum criteria required for testing to be appropriate as stated in the Gene Dossier:**

Criteria	Tick if this patient meets criteria
<b>Serious pneumococcal or pyogenic bacterial sepsis AND</b>	<input type="checkbox"/>
<b>&lt; 14 years of age AND</b>	<input type="checkbox"/>
<b>Exclusion of other susceptibility factors (e.g. antibody deficiency, asplenia, complement deficiency) AND</b>	<input type="checkbox"/>
<b>Lack of CD62 L shedding when cells are stimulated with lipopolysaccharide, as assess by flow cytometry</b>	<input type="checkbox"/>
<b>Proven family history of IRAK4 deficiency (at risk family members with known mutation)</b>	<input type="checkbox"/>

**If the patient does not fulfil these criteria and you still feel that testing should be performed please contact the molecular genetics laboratory**