

**TISSUE TYPING – BLOOD TESTING FOR THE KIDNEY TRANSPLANT WAITING LIST,
LIVING DONOR TRANSPLANTATION AND DONOR SPECIFIC ANTIBODY TESTING**

Cross references	Australian Red Cross Blood Service NSW Solid Organ Transplant Request Form, found at: http://resources.transfusion.com.au/cdm/singleitem/collection/p16691coll1/id/966/rec/4
1. Purpose	The accurate and timely collection of specimens required for the kidney transplant waiting list, live donor kidney transplants and donor specific antibody (DSA) testing.

2. Process

All tissue typing tests are conducted by the Australian Red Cross Blood Service (ARCBS) tissue typing department in Sydney. Specimens must be sent with the Solid Organ Transplant Request Form via the blood bank to the ARCBS. Tubes must be clearly labelled with the patient's name, date of birth and the date and time of collection. Hospital labels may be used but samples will not be accepted by the ARCBS unless the date and time of collection are recorded on the tube. Samples should be received by the ARCBS within 24 hours of collection. Whole blood samples are to be stored at room temperature, separated blood samples are to be stored at <4°C.

2.1 Blood testing for the kidney transplant waiting list

2.1.1 Initial and confirmatory testing (KR1 & KR2)

Blood for these tests may be collected Monday to Thursday of normal working weeks and are not to be sent in directly before a weekend or a public holiday. Confirmatory tissue typing (KR2) is collected at least one day after the initial tissue typing (KR1).

Specimens required for initial and confirmatory tissue typing (KR1 & KR2):

- 20 ml ACD
- 10 ml clotted sample with gel

2.1.2 Maintaining patients on the transplant list

A monthly clotted sample, formerly referred to as a cytotoxic antibody screening or CYT, is required for all patients who are active on the kidney transplant waiting list. Specimens must be received by the ARCBS prior to 18th of each month.

Specimens required for monthly clotted sample

- 10 ml clotted sample with gel

2.2 Living donor transplantation

**RENAL DEPARTMENT
Workplace Instruction (WPI)**

Tissue typing for live donor pairs must be pre-booked with the ARCBS by the transplant coordinators and samples must be received at the ACRBS by 8.30am on the scheduled day of the test at the latest. Ideally specimens should be collected the day prior to testing to ensure that they are available on the day of the test.

2.2.1 Initial and confirmatory tissue typing (Stage 1 and Stage 3)

Recipient: 40 ml ACD
10 ml clotted sample with gel

Donor: 40 ml ACD

2.2.2 Flow cytometric crossmatch (Stage 2)

Recipient: 60 ml ACD
10 ml clotted sample with gel

Donor: 60 ml ACD

2.3 Donor specific antibody (DSA) testing

Pre- or post-transplant testing may be selected on the Solid Organ Transplant Request Form along with the indication for the test.

Specimens required for DSA testing

- 10 ml clotted sample with gel

3. Network file	SGH Renal department website, pathology collection at SGH, TSH & POW - final WPI to be emailed to CPIU Clinical Governance Document Team for upload to intranet
4. External references / further reading	Australian Red Cross Blood Service NSW tissue typing Investigation Cover Request Form, found at: http://resources.transfusion.com.au/cdm/singleitem/collection/p16691coll1/id/966/rec/4
5. Specialty/department committee approval	SGH Renal Transplant
6. Department head approval	George Mangos
7. Executive sponsor approval – NCD or CGM	Hayley Smithwick

Revision and Approval History

Date published	Revision number	Author (Position)	Date revision due
May 2015		Tania Burns (Renal transplant CNC)	May 2018
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