

User manual

STEP

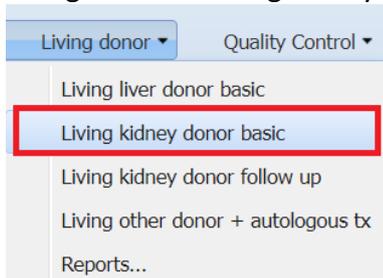
(10may2022)

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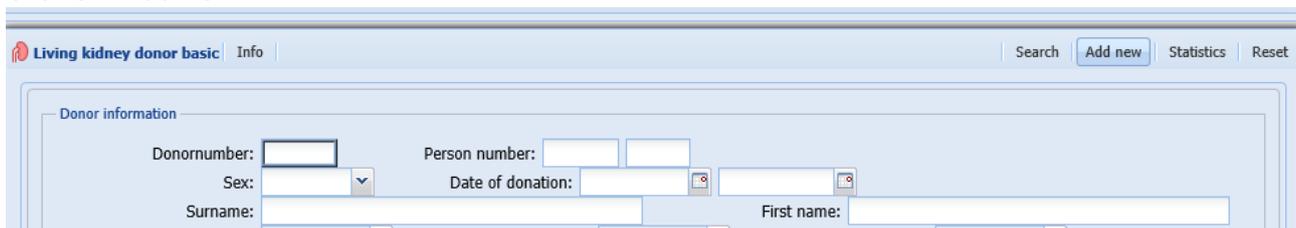
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1. Register an incompatible/altruistic living donor

Living donor -> Living kidney donor basic



Click on 'Add new'

A screenshot of the 'Living kidney donor basic' form in a web application. The form has a header with 'Living kidney donor basic' and 'Info' tabs, and buttons for 'Search', 'Add new', 'Statistics', and 'Reset'. The 'Add new' button is highlighted. Below the header, there is a section for 'Donor information' with fields for 'Donor number', 'Person number', 'Sex', 'Date of donation', 'Surname', and 'First name'. The 'Donor number' field is empty, and the 'Sex' field has a dropdown arrow.

1.1. Basic donor parameters

You can now start with the data entry. Donor number will be assigned after you have saved the data.

A few parameters are obligatory to register before you can save the data. The obligatory parameters are sex, country, birth-date, Tx. center, ABO blood group, relation code and organ type. Organ type is found under the "Preop." tab.

Relation code: For incompatible living donors select 'STEP-donor' as relation code, as the code is related to the possible transplantation and not the incompatible related-recipient.

Clinical data: GFR, sitting untreated BP, Diabetes and Proteinuria must be register on the donor to fulfil the requirements outlined in the STEP guidelines.

1.2. Linkage between donor and recipient

Create a link between the incompatible donor-recipient pair by clicking in the STEP relation field:

Basic information | Preoperative data | Infection serology | HLA Typing | Baseline risc factors | Kidney function

Tx-center: ML: Malmö/Lund | No basic info:

Local hospital: | ABO blood group: 0

Relation information

Relation code: | STEP Recip.:

Other relation: |

Bring forward the recipient by searching on Scandia number or person number, click on the specific patient and save

Registered recipients | Info | Search | Reset

[Enter search parameters]

Scandianumber: 201006 | Country: | Personnummer: |

First name: | Last name: |

Date of birth: | Tx center: |

| Scandianumber | Personnummer | First name | Last name | Tx center |
|---------------|--------------|----------------|-------------|-----------|
| → 201006 | 5011214 | First name: T. | Surname: K. | TA: Tartu |

1.3. HLA typing on Living donor

The donor must be typed and registered with 2nd field resolution on HLA-A, B, C, DRB1, DRB3, DRB4, DRB5, DQA1, DQB1, DPA1 and DPB1. If it is not possible to exclude ambiguities please register CWD alleles and state this by selecting from 'Haplotype/CWD alleles' list and/or add a comment.

Basic information | Preoperative data | Infection serology | HLA Typing | Baseline risc factors | Kidney function

Serological/serological equivalent

A: | B: | Bw4/Bw6: |

Cw: | DR: | DQ: |

Genomic

A: 0201 | B: 5701 | 1501 | C: 0602 | 0304 |

DRB1: 0401 | 0701 | DRB3/4/5: 4*0103 | 4*0102 | DPA1: 0103 | |

DPB1: 0301 | 0402 | DQA1: 0101 | | DQB1: 0302 | 0303 |

Haplotype/CWD alleles: |

Comments: | Calculated Bw: w4,w6

For match

A: 2 | B: 17 | 15 | Cw: 6 | 3 | DR: 4 | 7 | DQ: 3 | 3

2. Update information on recipient

Recipient -> All Recipients

The recipient must be on the kidney waiting list (active/on hold) to be part of the STEP program.

2.1. Recipient ABO acceptance

The default setting is that the recipient is allowed to receive kidneys of all blood groups.

If you want to add restrictions you need to add the blood groups that the recipient cannot accept, this is done on the waiting list under 'Non-accepted ABO'.

| Waiting List | Date of entry | Termination | Tx date | Tx number |
|--------------|---------------|-------------|---------|-----------|
| → KI: Kidney | 01-Mar-2022 | | | |

| STEP Donor | DSA | non-DSA | non-bead |
|------------|---------------------|---|--|
| 98306 | B*5101 DQA1*0101... | A*0301 A*1101 B*3501 C*0401 C*1502 DPA1*0103,DPB1*0301 DPA1*0103,DPB1*0402 DQA... | DQA1*0101,DQB1*0303 DQA1*0302,DQB1*... |

2.2. HLA typing on recipient

The recipient must be typed and registered with 2nd field resolution on HLA-A, B, C, DRB1, DRB3, DRB4, DRB5, DQA1, DQB1, DPA1 and DPB1. If it is not possible to exclude ambiguities please register CWD alleles and state this by selecting from 'Haplotype/CWD alleles' list and/or add a comment.

| Basic info | Clinical data | Address/Phone | HLA Typing | Antibody Screen Test | Fusion | Acceptable Antibodies | Previous Mismatches | Death |
|---|---------------|---------------|------------|--|--------|-----------------------|---------------------|--------|
| Serological/serological equivalent | | | | | | | | |
| A: | 2 | | B: | 57 | 62 | Cw: | 10 | 6 |
| Bw4/w6: | w4 | w6 | DR: | | | DQ: | 8 | 9 |
| Genomic | | | | | | | | |
| A: | 0201 | | B: | 5701 | 1501 | C: | 0602 | 0304 |
| DRB1: | 0401 | 0701 | DQB1: | 0302 | 0303 | DPB1: | 0301 | 0402 |
| DQA1: | 0201 | 0301 | DPA1: | 0103 | | DRB3/4/5: | 4*0103N | 4*0103 |
| Haplotype/CWD alleles: <input type="text"/> | | | | | | | | |
| Comments: <input type="text"/> | | | | Calc. Bw: <input type="text" value="w4,w6"/> | | | | |
| For match | | | | | | | | |
| A: | 2 | | B: | 17 | 15 | Cw: | 6 | 3 |
| DR: | 4 | 7 | DQ: | 3 | 3 | | | |

2.3. HLA antibody data on recipient

MFI/bead data on recipients with HLA antibodies must be transferred from Fusion software to YASWA to define if there are any donor specific antibodies (DSA) against the donors enrolled in the program. Separate manuals describing this procedure is found on the [homepage](#).

| Basic info | Clinical data | Address/Phone | HLA Typing | Antibody Screen Test | Fusion | Acceptable Antibodies | Previous Mismatches | Death |
|----------------|---------------|---|------------|----------------------|--------|-----------------------|---------------------|-------|
| Date of sample | | Antibodies | | | | | | |
| 09-Jul-2018 | | A*23:01,A*24:02,A*24:03,B*15:01,B*15:02,B*15:12,B*45:01,B*49:01,B*50:01,C*03:03,DQA1*01:02,DQB1*06:09,DQA1*01:03,DQB1*06:03 | | | | | | |

Bead information in the Fusion tab is isolated and currently only used for STEP match runs. Data found in 'Antibody screen test' and 'Previous mismatches' have no effect on these data.

Default setting is that antigens/beads with MFI \geq 2000 are regarded as positive. If you wish to view/change default values select the most recent sample in the 'Fusion' tab.

| HLA with mfi | | | Info | | | Back | Save | Reset | Filter; e.g. DRB1* |
|------------------|--------------|-----------------|-----------------------------|--------------|----------------|------|------------|----------------|--------------------|
| Scandianumber: 1 | | | Date of sample: 09-Jul-2018 | | | | | | |
| Bead data | | | | | | | | | |
| MFI | HLA | Status | MFI | HLA | Status | MFI | HLA | Status | |
| 4344.16 | A*24:02 | M: MFI cut-off | 612.33 | B*67:01 | M: MFI cut-off | 0 | DRB1*09:02 | M: MFI cut-off | |
| 3683.56 | A*23:01 | M: MFI cut-off | 610.38 | DQA1*04:0... | M: MFI cut-off | 0 | DRB1*10:01 | M: MFI cut-off | |
| 3602.71 | A*24:03 | M: MFI cut-off | 587.48 | C*03:02 | M: MFI cut-off | 0 | DRB1*11:01 | M: MFI cut-off | |
| 2861.67 | B*15:01 | M: MFI cut-off | 566.1 | DQA1*02:0... | M: MFI cut-off | 0 | DRB1*14:01 | M: MFI cut-off | |
| 2781.26 | B*15:12 | M: MFI cut-off | 554.08 | A*80:01 | M: MFI cut-off | 0 | DRB1*14:02 | M: MFI cut-off | |
| 2636.83 | C*03:03 | M: MFI cut-off | 553.31 | B*53:01 | M: MFI cut-off | 0 | DRB1*14:54 | M: MFI cut-off | |
| 2490.91 | B*15:02 | A: Acceptable | | | | | | M: MFI cut-off | |
| 2430.91 | B*49:01 | M: MFI cut-off | | | | | | M: MFI cut-off | |
| 2419.47 | DQA1*01:0... | U: Unacceptable | | | | | | M: MFI cut-off | |
| 2410.92 | B*50:01 | M: MFI cut-off | 365.1 | A*43:01 | M: MFI cut-off | 0 | DRB1*16:01 | M: MFI cut-off | |
| 2232.41 | B*45:01 | M: MFI cut-off | 247.08 | B*27:08 | M: MFI cut-off | 0 | DRB3*01:01 | M: MFI cut-off | |
| 2103.01 | DQA1*01:0... | M: MFI cut-off | 240.92 | A*66:01 | M: MFI cut-off | 0 | DRB3*02:02 | M: MFI cut-off | |
| 1985.08 | B*13:02 | M: MFI cut-off | 237.21 | B*55:01 | M: MFI cut-off | 0 | DRB3*03:01 | M: MFI cut-off | |
| 1980.39 | B*15:03 | M: MFI cut-off | 214.39 | B*42:01 | M: MFI cut-off | 0 | DRB4*01:01 | M: MFI cut-off | |
| 1842.2 | B*15:10 | M: MFI cut-off | 170.89 | DRB5*01:01 | M: MFI cut-off | 0 | DRB4*01:03 | M: MFI cut-off | |
| | | | | | | | | M: MFI cut-off | |

If you click on the status field you are able to change a positive MFI/bead to 'A: Acceptable' or a negative bead to 'U: unacceptable'.

Previous mismatches/non-acceptable antigens must be given separately in the Fusion tab or as a non acceptable antigen in YASWA.

Before each match run it is important to check that the most recent sample in the Fusion tab is updated with correct information, as it is this information that is used in the match algorithm.

If a new sample has been exported from Fusion to YASWA and you wish to bring forward manually conclusions made on a previous sample, that deviate from the default conclusion, you click on the 'Add conclusions' button.

| MFI | HLA | Status | MFI | HLA | Status | MFI | HLA | Status |
|--------|-----------------------|----------------|-------|------------|----------------|-------|-----------------------|----------------|
| 5854 | DRB1*04:01 | M: MFI cut-off | 65.24 | A*24:03 | M: MFI cut-off | 35.65 | B*59:01 | M: MFI cut-off |
| 4940 | DRB1*04:03 | M: MFI cut-off | 64.48 | B*47:01 | M: MFI cut-off | 34.92 | B*53:01 | M: MFI cut-off |
| 4803 | DRB1*04:02 | M: MFI cut-off | 64.23 | B*27:05 | M: MFI cut-off | 34.43 | C*03:03 | M: MFI cut-off |
| 4456 | DRB1*04:04 | M: MFI cut-off | 63.74 | B*44:03 | M: MFI cut-off | 33.68 | DRB1*01:03 | M: MFI cut-off |
| 3892 | DRB1*04:05 | M: MFI cut-off | 62.98 | DRB1*01:02 | M: MFI cut-off | 32.62 | DRB1*14:02 | M: MFI cut-off |
| 2817 | A*34:01 | M: MFI cut-off | 62.97 | DRB3*03:01 | M: MFI cut-off | 32.15 | DRB1*15:01 | M: MFI cut-off |
| 1294 | B*37:01 | M: MFI cut-off | 62.67 | B*41:01 | M: MFI cut-off | 31.37 | B*81:01 | M: MFI cut-off |
| 589.36 | DRB1*09:02 | M: MFI cut-off | 60.99 | DRB4*01:03 | M: MFI cut-off | 30.33 | DPA1*01:05,DPB1*28:01 | M: MFI cut-off |
| 511.05 | A*66:01 | M: MFI cut-off | 59.88 | B*18:01 | M: MFI cut-off | 30.21 | A*02:06 | M: MFI cut-off |
| 485.47 | DQA1*05:01,DQB1*02:01 | M: MFI cut-off | 59.33 | A*32:01 | M: MFI cut-off | 30.20 | DRB1*15:03 | M: MFI cut-off |
| 424.88 | DRB1*07:01 | M: MFI cut-off | 59.11 | A*68:01 | M: MFI cut-off | 28.14 | A*24:02 | M: MFI cut-off |
| 393.74 | A*25:01 | M: MFI cut-off | 58.67 | B*51:01 | M: MFI cut-off | 28.10 | C*15:02 | M: MFI cut-off |
| 368.12 | DRB1*09:01 | M: MFI cut-off | 58.60 | A*74:01 | M: MFI cut-off | 25.98 | DPA1*03:01,DPB1*13:01 | M: MFI cut-off |

This will bring forward the conclusions made on the previous sample, which you will now be able to modify and save.

2.4. Non-acceptable antigens on recipient

In some cases it is necessary to block a whole antigen, the reason for this can be common antigens where no bead exists and/or the DQ/DP matching on dimers.

Examples:

- There is currently no bead for HLA-C*07:01 and if you know that you will not accept any C*07 subtypes for a specific recipient you add HLA-Cw7 as a non-acceptable antigen.
- Your recipient has strong antibodies against DQB1*05 and you don't want to accept any combinations of DQA with DQB1*05 you block HLA-DQ5.

Basic info | Clinical data | Address/Phone | HLA Typing | Antibody Screen Test | **Fusion** | Acceptable Antibodies | Previous Mismatches | Status

Date of sample: 16-Sep-2021 | Antibodies: B*51:01 C*07:02 DQA1*01:01,DQB1*05:01

STEP - Non acceptable antigens

HLA-A:

HLA-B:

HLA-Cw: 7

HLA-DR:

HLA-DQ: 5

HLA-DP:

HLA-DRB3/4/5:

HLA-DQA:

HLA-DPA:

2.5. Add recipient to match run

When you are ready to add the recipient/pair to the match run, you enter the waiting list and select the specific match run from the list:

Recipient information Info Back Save Reset Print

Scandianumber: 207789 Nationality: S: Sweden Sex: F: Female

Date of Birth: Person Number: Surname: Surname: First Name: First name: :

Recipient Status: ALIVE; STEP

Waiting list status: W: Withdrawn Waiting list type: KI: Kidney Urgency: NT: Temporarily not trar Treatm. center: LUND, Dialysavd/Med kli

First regist.: 01-Mar-2022 Latest regist.: 09-May-2022

Basic info Clinical data Address/Phone HLA Typing Antibody Screen Test Fusion Acceptable Antibodies Previous Mismatches Status

ABO Blood Group: 0 Rhesus D: POS

Transplant center: ML: Malmö/Lund Department:

Notes on Patient:

Waiting List

Add new

| Waiting List | Date of entry | Termination | Tx date | Tx number |
|--------------|---------------|-------------|---------|-----------|
| → KI: Kidney | 01-Mar-2022 | | | |

Waiting list information Info Back Save Reset Print Add Liver Add Pancreas

Generic data

Scandianumber: 207789 Surname: Surname:

Waiting list type: KI: Kidney Date of entry: 01-Mar-2022

Urgency: NT: Temporarily not transp

Future Withdrawn from: Future Withdrawn to:

Date of first urgency: 01-Mar-2022 Date of last urgency: 03-May-2022

Transplant center: ML: Malmö/Lund Treatment/dialysis center: AC: LUND, Dialysavd/Med k

Immunization: NI: Non immunized Date of last change of Immunization: 21-Feb-2022

ABO: 0 STAMP Sign Up: STAMP Status:

Specific data Infection STEP LAMP LAMP QC STAMP STAMP log STAMP QC STAMP Aux Urgency History Termination

Non-accepted ABO: A,A1,A1B,A2,A2B,AB,B Indication for STEP: ABOi

Max anti-A titre: 512 Max anti-B titre: 128 Date of analysis: 14-Apr-2022

STEP run remarks

| Included in STEP run | Remarks |
|--|----------|
| <input checked="" type="checkbox"/> 10re: 10th re-run 2022 | |
| <input checked="" type="checkbox"/> 9: 9th run 2022 | |
| <input type="checkbox"/> 9re: 9th re-run 2022 | |
| <input type="checkbox"/> 10: 10th run 2022 | |
| <input type="checkbox"/> 10re: 10th re-run 2022 | |
| STEP Dono 11: 11th run 2022 | non-bead |
| 12: 12th run 2022 | |

In the menu 'Recipient' -> 'STEP' -> 'Participating pairs' you are able to get an overview of what recipients/pairs are included in which match run from your own center.

