

# Workshop

## HLA class I and II typing on a molecular genetic basis, using **HISTO TYPE** SSP kits

September 11th, 2007

Prague, Czech Republic

# HISTO

# **HISTO TYPE**

**SSP HLA-Typisierung**

*SSP HLA Typing*

**09 / 2007**



**Reaktionsmixe**

**gebrauchsfertig vorgetropft**

*Reaction Mixes ready to use prealiquoted*

**Typisierungskits für Klasse I + II**

*Typing Kits for Class I + II*

**SCORE™ Auswerte-Software**

*SCORE™ Evaluation Software*

# HISTO TYPE testkits for tissue typing of HLA-class I + II antigens on a molecular genetic basis (low resolution)

## HLA-class I

- HISTO TYPE A low (24 mixes / 20 tests)
- HISTO TYPE B low (48 mixes / 20 tests)
- HISTO TYPE C low (23 mixes / 20 tests)
- HISTO TYPE B27 (1 mix / 48 or 96 tests)

## HLA-class II

- HISTO TYPE DR low (24 mixes / 20 tests)
- HISTO TYPE DR mini (8 mixes / 20 tests)
- HISTO TYPE DRB3/4/5 (3 mixes / 20 tests)
- HISTO TYPE DQB low (8 mixes / 20 tests)
- HISTO TYPE DQB high updated (46 mixes / 20 tests)

## Combi kits for HLA-class I + II

- HISTO TYPE ABC (95 mixes / 20 tests)
- HISTO TYPE ABDR (96 mixes / 20 tests)
- HISTO TYPE DRAB (95 mixes / 20 tests)
- HISTO TYPE DR/DQB (32 mixes / 20 tests)
- HISTO TYPE ABDR 384 (4x96 mixes / 100 tests)
- All Kits are available licensed or not licensed

## Accessories

- EXTRA GENE I (Kit for DNA extraction / salting out method / 50 extractions)
- DNA-length standard ( $\phi$ X174/Hae III; 72bp - 1.353bp)
- Wipe test (contamination control of HLA-class I + II amplicons)
- BAG-Cycler Check (Kit for evaluation of temperature uniformity in thermal cyclers)

# Contents of the HISTO TYPE SSP kits

- 20 HISTO TYPE plates / strips sufficient for 20 HLA typings, with the pre-dropped and dried reaction mixtures, consisting the specific primers, internal control primers and nucleotides.
- Contamination control (integrated in the last position of the test plate or delivered separately in 8 well PCR strips)
- 10 x PCR buffer
- 8er strip-caps or PCR foil
- Instructions for use
- Lot specific specificity table, evaluation diagram and worksheet
- (Taq Polymerase (5 U/μl) ; only included in licensed kits)



# Procedure of a HLA typing using HISTO TYPE SSP test kits


1. Extraction of the DNA using e.g. EXTRA GENE I
2. Preparation of the mastermix using following reagents:
  - \* Taq Polymerase
  - \* 10 x PCR buffer
  - \* DNA (50ng/reaction)
  - \* Aqua dest.
3. Adding 10µl of the mastermix into each prealiquoted reaction mix and closing wells with caps/foil

4. Starting the PCR program:

Program step	Temperature	Time	No. of cycles
First Denaturation	96°C	5 min.	1 cycle
Denaturation	96°C	20 sec.	5 cycles
Annealing + Extension	68°C	60 sec.	
Denaturation	96°C	20 sec.	10 cycles
Annealing	64°C	50 sec.	
Extension	72°C	45 sec.	
Denaturation	96°C	20 sec.	15 cycles
Annealing	61°C	50 sec.	
Extension	72°C	45 sec.	
Final Extension	72°C	5 min.	1 cycle

5. Detection with gel electrophoresis and Ethidium Bromide staining
6. Photo documentation and interpretation (by hand or alternatively with SCORE software)

# HISTO TYPE - Advantages

- Easy and fast test procedure ( only 3 hours ; including DNA extraction )
- Less amount of DNA (50ng/reaction) and enzyme (0,07µl/reaction) needed ( costs reducing )
- Easy evaluation of the typing results by hand (diagrams) or by software (SCORE software)
- The kits will be updated regularly with the latest allele lists of the Anthony Nolan Institute ([www.anthonynolan.org.uk](http://www.anthonynolan.org.uk))
- All HISTO TYPE kits are  marked for in vitro diagnostic use (High quality control of all production steps)
- The HISTO TYPE kits are well established on the European, Middle East and Asian market
- Best service support by well experienced scientists

# HISTO TYPE - Customers



Blood banks



Transplantation Centres



University Clinics



HLA - Laboratories



# Next! HISTO TYPE

## high resolution kits for HLA class II

- ◆ New product line for high resolution typing:
  - Individual group specific high resolution typing kits for DRB1 and DQB1
  - Each kit will type a specific allele group to allelic level for the most frequent alleles.
  - The kits will function with the SCORE software for result interpretation.
  - The product family will have a complete technical file for IVD purposes.

# HISTO TYPE testkits for high resolution typing of HLA-class II antigens on a molecular genetic basis

## HLA-class II

- HISTO TYPE DRB1\*01 (6 mixes / 12 tests)
- HISTO TYPE DRB1\*03 (15 mixes / 12 tests)
- HISTO TYPE DRB1\*04 (23 mixes / 8 tests)
- HISTO TYPE DRB1\*07/09 (6 mixes / 12 tests)
- HISTO TYPE DRB1\*08/12 (18 mixes / 8 tests)
- HISTO TYPE DRB1\*11 (16 mixes / 8 tests)
- HISTO TYPE DRB1\*13 (19 mixes / 8 tests)
- HISTO TYPE DRB1\*14 (18 mixes / 8 tests)
- HISTO TYPE DRB1\*15 (8 mixes / 12 tests)
- HISTO TYPE DRB1\*16 (7 mixes / 12 tests)
  
- HISTO TYPE DQB1\*02/04 (5/2 mixes / 12 tests)
- HISTO TYPE DQB1\*03 (15 mixes / 6 tests)
- HISTO TYPE DQB1\*05 (5 mixes / 12 tests)
- HISTO TYPE DQB1\*06 (21 mixes / 8 tests)
  
- HISTO TYPE / DNA-DQB (high resolution) (45 mixes / 20 tests)
  
- All Kits are available licensed or not licensed

# Advantages of the new HISTO TYPE high resolution kits:

- + Very fast way to get a high resolution result (~ 3 hours, including DNA extraction)
- + Less amount of mixes than current systems
  - ➡ (safes Taq Polymerase)
- + Easy and well known handling