A COLLECTION OF EBV-TRANSFORMED B-CELL LINES

WELSH BLOOD SERVICE
GWASANAETH GWAED CYMRU

WELSH TRANSPLANTATION AND IMMUNOGENETICS LABORATORY

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FS 27925 Since 1995 | CPA Since 1995 | ACCREDITED LABORATORY Since 1998

Introduction

Over the past 7 years we have established a bank of EBV-transformed B-lymphoblastoid cell lines (BCLs).

These are routinely used as reference material for DNA-based typing, cells for HLA antibody screening by flow cytometry and archival material for our growing collection of new and rare HLA alleles.

Novel, rare and 'unusual' HLA types are highlighted during routine patient and Welsh Bone Marrow Donor Registry donor typing.

Donor consent

Informed written consent is obtained before HBsAg, HIV, HCV screening and subsequent B-lymphocyte transformation.

Quality control and molecular testing

Strict 'bio-identity' checks are performed before and after transformation and after each BCL expansion by confirming HLA-A, B, DR, DQ concordance by PCR-SSP.

Each BCL is regularly tested for mycoplasma, bacterial and fungal contamination by Hoechst staining.

All BCLs are typed, by PCR-SSP, for ABO blood group alleles and HLA-A, B, C, DRB1/3/4/5, DQA1, DQB1, at the '2-digit' level as a minimum.

Nucleotide sequencing has been performed on the 'alleles of interest' of 33 BCL (class I - exons 2, 3 and class II exon 2, as a minimum).

Additional typing, on selected BCLs, includes: DPA1, DPB1, HA-1, HA-2, HFE, HPA, MICA, MICB.

Availability

This resource is available as BCLs or genomic DNA to bona-fide laboratories for use as 'research reagents' on a strictly non-commercial basis.

A listing of over 200 BCLs covers:

- HLA, ABO types in I.D. and 'allele of interest' order.
- Consensus HLA typing of our BCLs used in the UCLA International Cell Exchanges (currently 12).
- 16 new alleles (e.g. A*0224, B*0802, DRB1*0704) and 18 rare alleles (e.g. A*2423, B*4703, DRB1*0816) found and sequenced in our Laboratory.
- 22 BCLs used in pools for antibody screening by flow cytometry (covering all the major HLA-A, B, C, DR and DQ specificities).

BCLs are supplied free of charge but a handling fee is levied to cover cell culture, microbiological quality control, authentication, processing, packaging and postage/transportation costs.

Procedures are provided for the resuscitation of frozen BCLs, their routine culture, cryopreservation and processing for use in antibody screening by flow cytometry.

Further information is available from:
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Please refer to our Laboratory's website for complete BCL listings, user responsibilities and conditions of supply.
Visit: www.wtail.org.uk

Extract of table listing B-cell lines in allele of interest order.

Allele of interest	ID No.	HLA PHENOTYPE								Additional Information	Accession No (shaded allele)	Ref	Additional ID
		A	B	C	DRB1	DQA1	DQB1	DPA1	DPB1				