CLAIMS

1. A vector comprising

a) at least 10 functional human heavy chain V genes wherein at least 10 functional human heavy chain V genes are in the same sequential order in which they can be found in the human germline and comprise intervening sequences;
b) at least one human heavy chain D gene and at least one human heavy chain J gene;
c) a murine μ enhancer;
d) a murine switch μ element;
e) a murine C gene which lacks the C_H1 exon wherein the C gene is selected from $C\gamma1$, $C\gamma2b$ and/or $C\gamma2a$ and
f) a murine 3' enhancer region

wherein the vector does not comprise a further murine C gene.

2. A vector according to claim 1 wherein said murine 3' enhancer region is at least about 42kb in size.

3. A vector according to claim 2 wherein said murine 3' enhancer region comprises one or more or all enhancer elements selected from hs3A, hs1.2, hs3B, hs4, hs5, hs6 and hs7.

4. A vector according to a preceding claim comprising 10 to about 44 functional human V genes.

5. A vector according to any preceding claim wherein said vector is a yeast artificial chromosome (YAC).

6. A transgenic murine host cell transformed with a vector according to a preceding claim.

7. A transgenic murine host cell according to claim 6 wherein said cell is an ES cell.

8. A transgenic mouse comprising a vector according to any of claims 1 to 5 or a cell according to claim 6 or 7.

9. A transgenic mouse according to claim 8 wherein said mouse comprises one or more non-functional endogenous immunoglobulin loci.

10. A transgenic mouse according to claim 9 wherein said mouse comprises a non-functional endogenous lambda light chain locus, a non-functional endogenous kappa light chain locus and/or a non-functional endogenous heavy chain locus.

11. The use of a transgenic mouse according to any of claims 8 to 10 or a cell according to claim 6 or 7 in producing HCAb or V_H domains.

12. The use of a transgenic mouse according to any of claims 8 to 10 in constructing a library.

13. A method for making a library comprising ex vivo immunisation of a transgenic mouse according to any of claims 8 to 10 or ex vivo tissue or cells of a transgenic mouse according to any of claims 8 to 10.

14. A method for making a HCAb or V_H domain comprising introducing and expressing a vector according to any of claims 1 to 5 in a mouse or in a murine host cell.

15. A method for producing a soluble V_H binding domain comprising the following steps:
a) expressing a vector of any of claims 1 to 5 in a transgenic mouse,
b) isolating a cell or tissue expressing a HCAb,
c) cloning the sequence encoding the V_H domain from mRNA derived from the isolated cell or tissue,
d) constructing a library from cloned transcripts and
e) isolating the V_H domain.