Antibody discovery platform & **IgG** format conversion

PHAGE DISPLAY

Universal human antibody gene libraries are used at Abcalis to select monoclonal Isolation of lymphocytes amplfication of VH and VL genes; cloning into phagemid (only done once, creates the "universal library" which delivers antibodies against any antigen) Human naive antibody phage display library 000000 000000 000000 Incubation of Ab-phage on Phage amplification immobilized antigen 000000 000000 Panning Selection of phage 000000 displayed scFv antibodies 3x rounds coinfection with helperphage 2 rd round production of . monoclonal scFvs & screening for Elution and infection individual binders of E.coli ENGINEERING scF

conversion to the format of choice

human lgG

mouse IgG

rabbit IgG

Molecular biology techniques allow to introduce fast and accurate changes in the amino acid sequence of the antibodies after selection. This allows to produce each antibody in different IgG formats, depending on the heavy chain of the species that better fits the final test. Furthermore, it allows to mutate the Fc region or to genetically fuse different protein tags to the Fc-part for better surface immobilization.

Removing of unbound phage

CONTACT US Phone +49 151 26517262

hello@abcalis.com I www.abcalis.com Inhoffenstr. 7 I 38124 Braunschweig I Germany © ABCALIS 2020



Protein tag fusion

tailor-made IgG

qoat lqG

antibodies via phage display, without any need of using animal immunization. Phage particles display a unique monovalent antibody and carry the genetic information that corresponds to it. This principle allows the *in-vitro* selection, among billions of different antibody phage, of monoclonal antibodies showing specific molecular interaction with the target. This controlled process biochemical conditions can be adjusted to match precisely those of the final diagnostic test, ranging from the buffer composition to the elimination of unwanted cross-reactivities.

c-engineering