

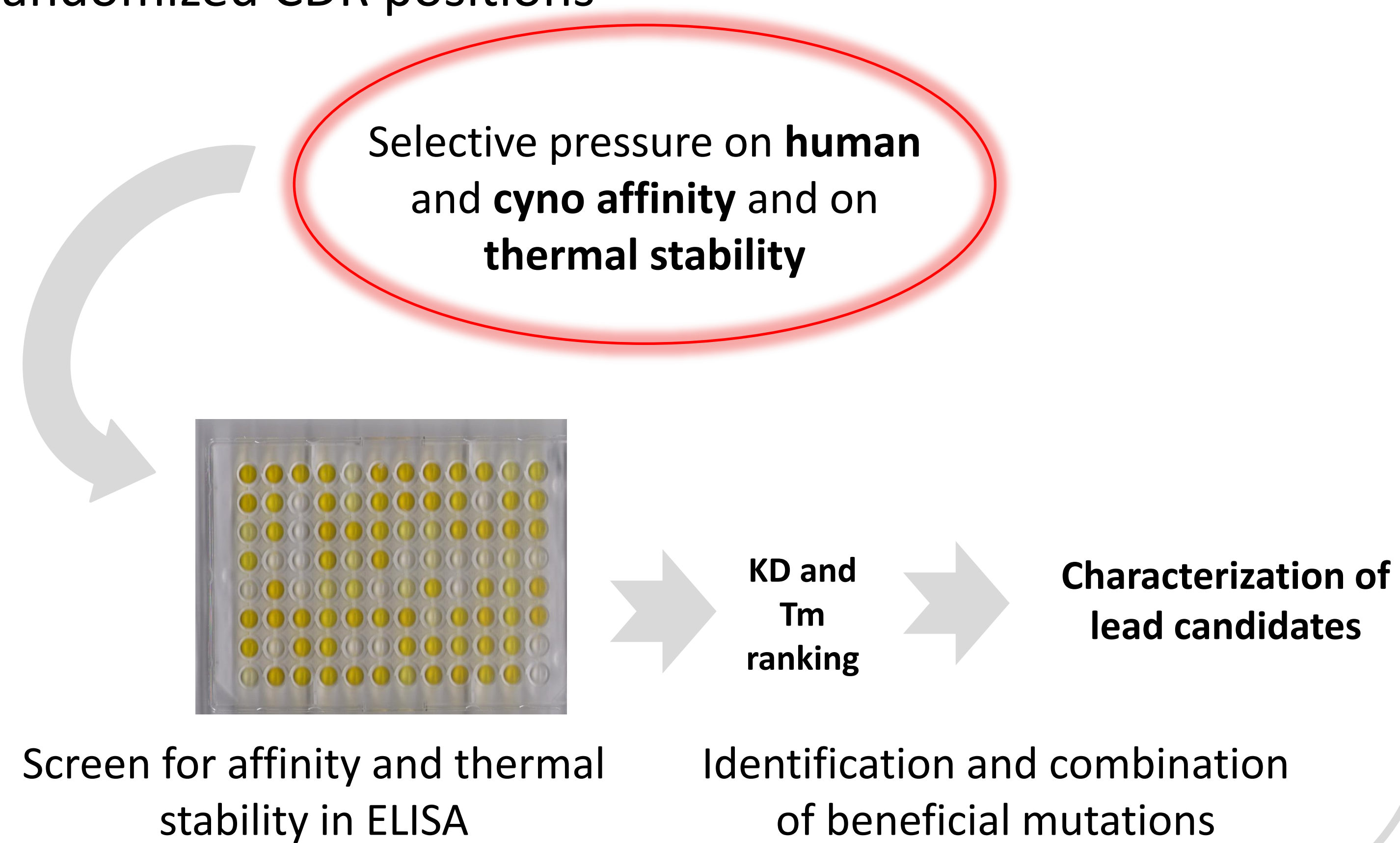
100fold Affinity Improvement of a Cross Reactive and Highly Stable Therapeutic Antibody

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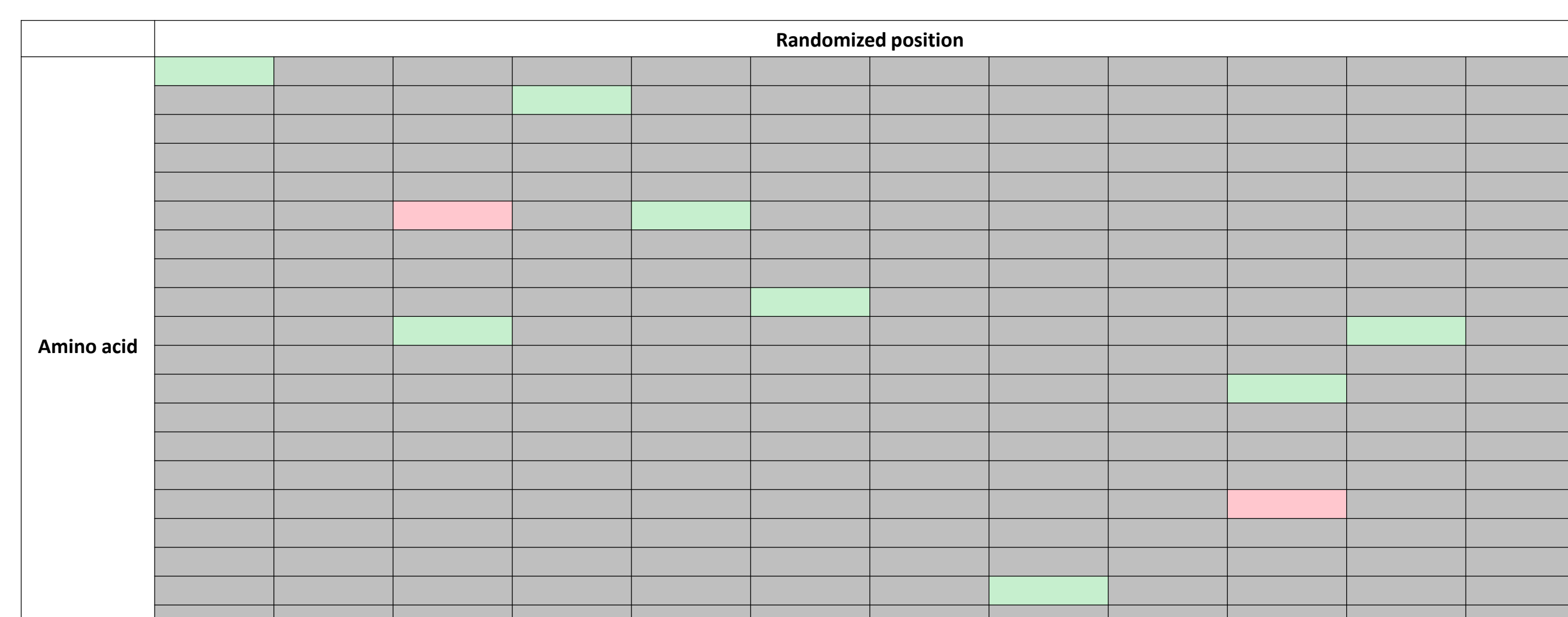
With our novel AbAccel technology we improved an antibody for therapeutic application. The optimized antibody binds to human and cyno target protein with KD values <1 nM, and shows a T_m of >70°C. The integrative platform can be used for affinity maturation, humanization and optimization of biophysical properties.

Overview:

- 1E+9 AbAccel scFv Phage Display library with more than 50 randomized CDR positions

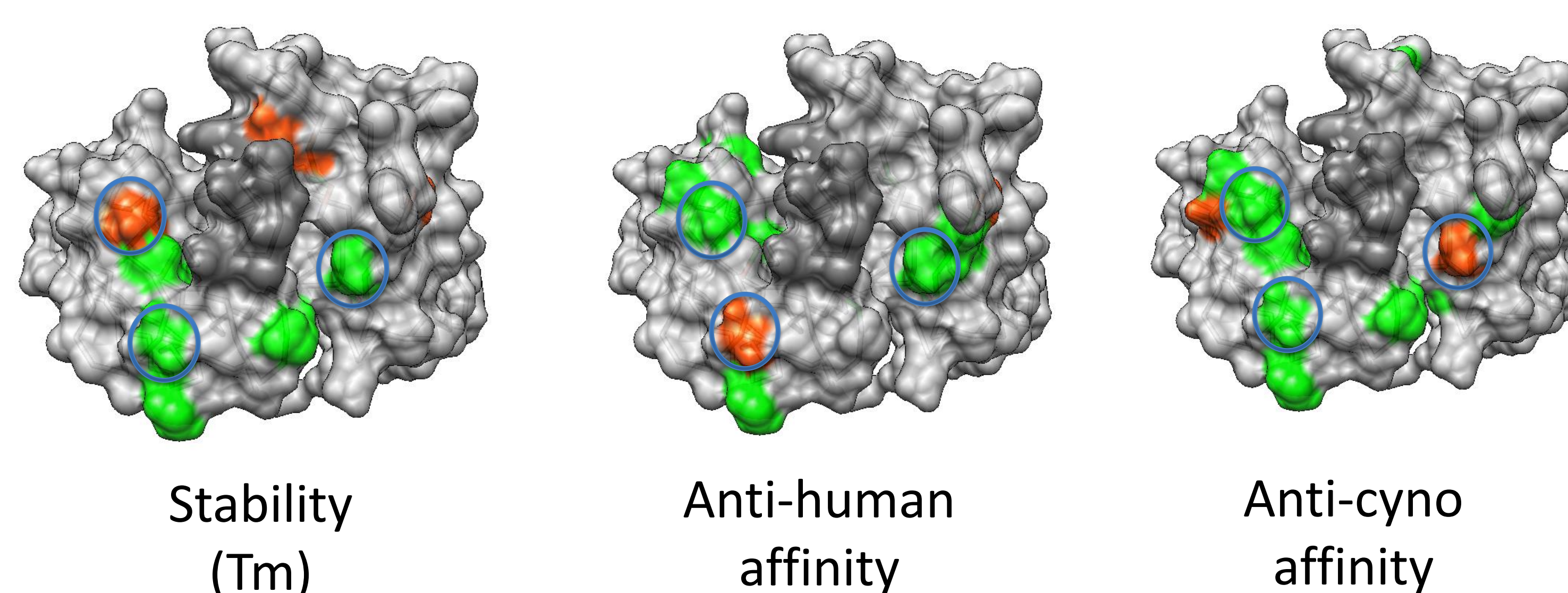


Sequence Activity Relationship (SAR):



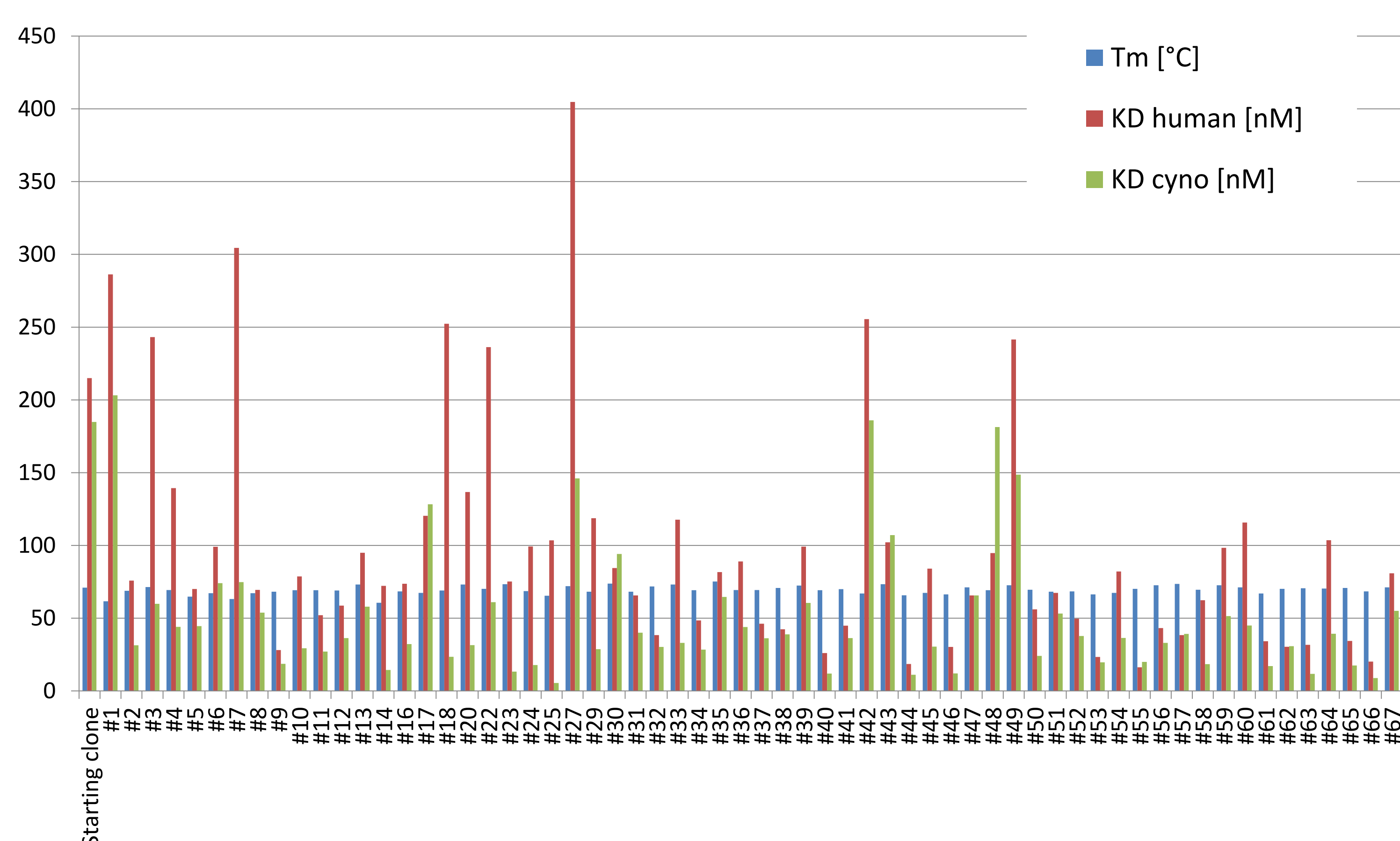
- SAR analysis allows the identification of beneficial mutations (marked in green)

Mapping of Important Residues:



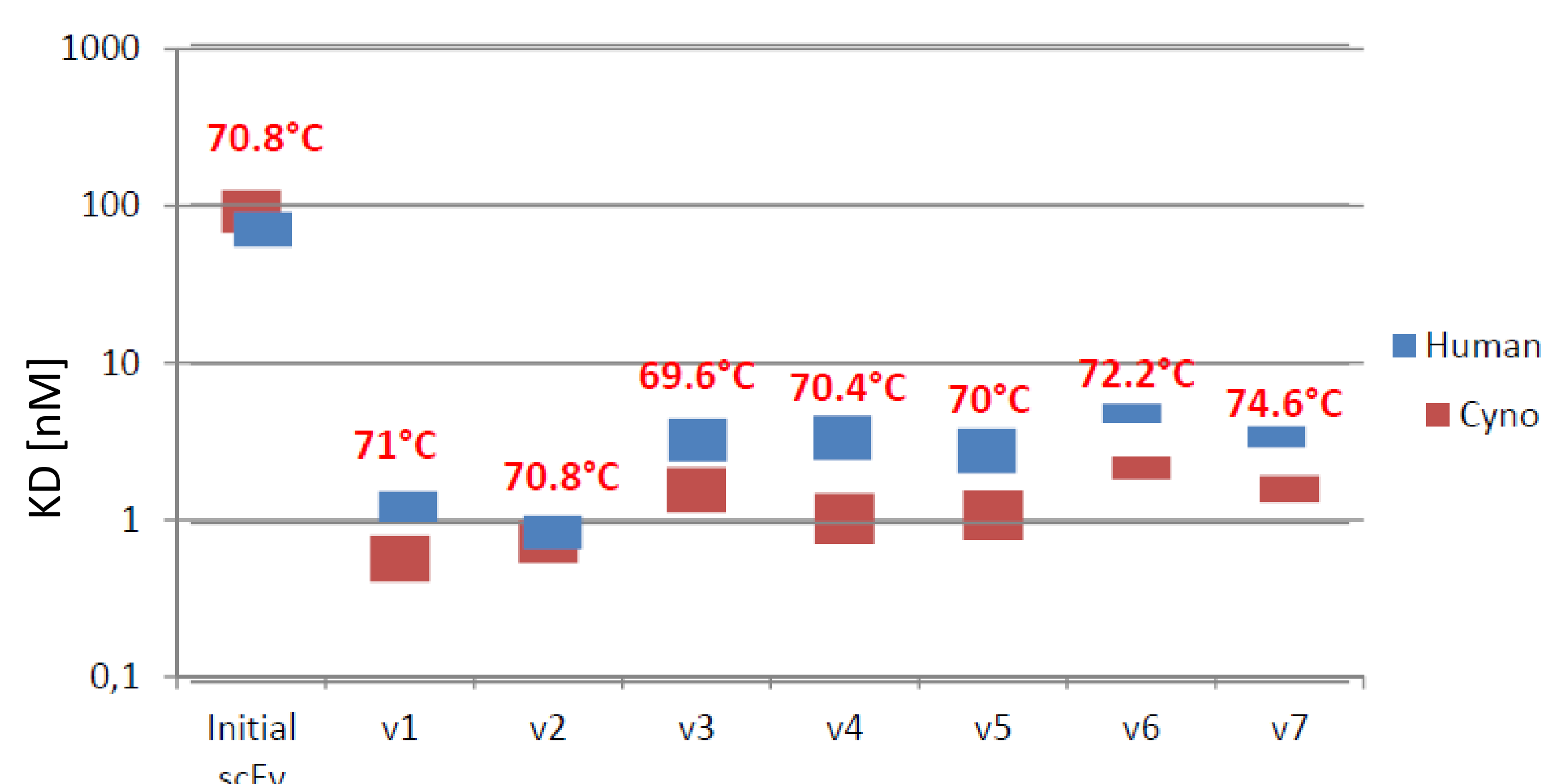
- Some mutations (in circles) show different impact on stability, human and cyno affinity

Properties of Selected Clones:



- Several candidates with 10fold reduced KD for human and cyno target protein were isolated from the affinity maturation library

100fold Improvement Reached by Combination of Beneficial Mutations:



- Combination of beneficial mutations resulted in 100fold affinity improvement without loss of thermal stability