bio-protocol www.bio-protocol.org/e2366 Vol 7, Iss 13, Jul 05, 2017
DOI:10.21769/BioProtoc.2366

Supplement

1. **Sequence of mature human HLA class I histocompatibility antigen, HLA A*0201 α-chain, 277aa**

   MGSHSMRYFF TSVSRPGRGE PRFIAVGYVD DTQFVRFDSD AASQRMEPRA PWIEQEGPEY
   WDGETRKVKA HSQTHRVDLG TLRGYYNQSE AGSHTVQRMY GCDVGSDWRF LRGYHQYAYD
   GKDYIALKED LRSWTAADMA AQTTKHKWEA AHVAEQLRAY LEGTCVEWLR RYLENGKETL
   QRTDAPKTHM THHAVSDHEA TLRCWALSFY PAEITLTWQR DGEDQTQDTE LVETRPAGDG
   TFQKWAAVVV PSGQEQRYTC HVQHEGLPKP LTLRWEP

2. **Sequence of mature human β2-microglobulin, 100aa**

   MIQRTPKIQV YSRHPAENGK SNFLNCYVSG FHPSDIEVDL LKNGERIEKV EHSDLSFSKD
   WSFYLLYYTE FTPTEKDEYA CRVNHVTLSQ PKIVKWDRDM

3. **Binder sequence, example: ILA, 9aa**

   ILAKFLHWL

4. **OriginLab script for fitting of thermal denaturation curves**

   The following shows the essential part of the Originlab (V7.5 and higher) fitting-definition-function (.fdf) file for a non-linear curve fit of measured $[\Theta]_{MRW}$ (in deg cm^2 dmol^{-1}) values as a function of temperature in degree Celsius according to Eqs. (4) to (10).

```
[FITTING PARAMETERS]
Naming Method=User-Defined
Names=c,aN,bN,aU,bU,dHv,Tm
Meanings=molar_prot_concentration,slope_native,intercept_native,slope_un
folded,intercept_unfolded,delta_H_vant_Hoff_J_mol,melting_temperature_Ce
lsius
...
...
[FORMULA]
double m, t, k, d, f;
m=Tm+273.15;
t=x+273.15;
R=8.3145;
k=exp(dHv/(R*t)*(t/m-1.0)-ln(0.75*c*c));
d=1.0/(3.0*k*c*c);
f=(-0.5*d+(0.25*d^2+d^3/27.0)^0.5)^(1.0/3.0)-
(0.5*d+(0.25*d^2+d^3/27.0)^0.5)^(1.0/3.0)+1.0;
y=(aN+bN*x-aU-bU*x)*f+aU+bU*x;
```