Supplementary information 4

Protein quantification

Protein quantification was performed with the bicinchoninic acid (BCA) protein assay kit (Thermo Scientific Pierce) according to the manufacturer’s instruction which are briefly listed in the following steps. After protein quantification, samples were stored at -80°C until further analysis.

1. Duplicates of 25 μl of each standard or unknown sample were removed into a microplate well.
2. 200 μl of the working reagent was added into each well and the plate was placed on a plate shaker for 30 seconds.
3. Plate was covered and incubated at 37°C for 30 minutes.
4. Cool plate to room temperature for 12 minutes.
5. Measure the absorbance at 562 nm on a plate reader 2 times.

The RC-DC Protein Assay

#### This assay is based on the Lowry assay but has been modified to be reducing agent compatible (*RC*) as well as detergent compatible (*DC*).

1. γ-Globulins stock solution (3 mg/ml) (Sigma-Aldrich, Lot 032k7041 G-500g) was made with rabilloud buffer (7 M urea, 2 M thiourea, 4% CHAPS, 2.0% bio-lyte 3/10 ampholyte).
2. Standard dilutions (0,0.25,0.50,0.75,1.00,1.50 μg/μl) were prepared
3. 25 μl samples or standards were added into clean dry 1.5 ml tubes
4. 125 μl reagent Ⅰ were added into each tube, vortex and incubate 1 min at RT.
5. 125 μl reagent Ⅱ was added into tubes, vortex and spin at 14,000×g, 5 mins, 4°C.
6. Removed the supernatant by using the 1000 μl and 200 μl micropipette completely. Repeat steps 4, 5, 6.
7. Let it air dry with the lid off at RT for 1 hour.
8. Add 127 μl reagent A, vortex and incubate at RT for 5 min or until precipitate has dissolved.
9. Vortex and add 1 ml reagent B, vortex immediately and leave at RT for 5 min to allow colour to develop.
10. Transfer 250 μl from each tube to well in 96 well plate. Read absorbance at 750 nm.

