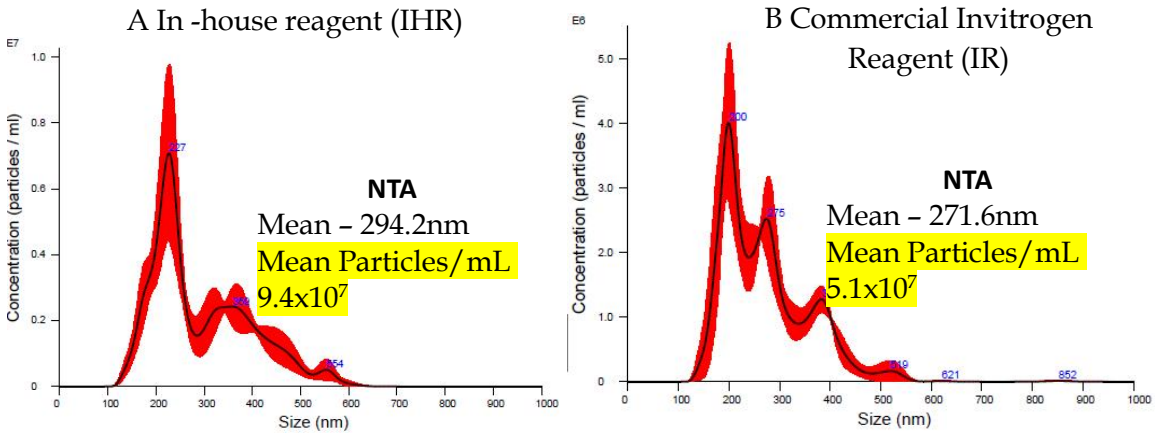
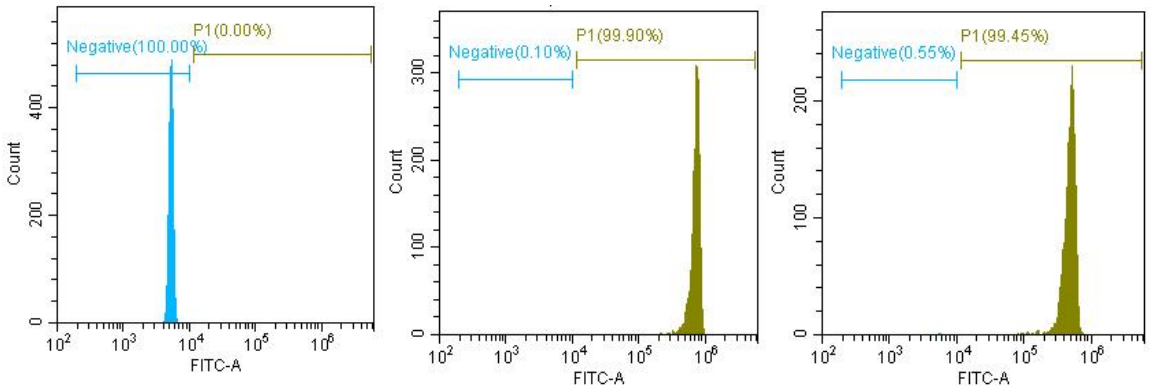
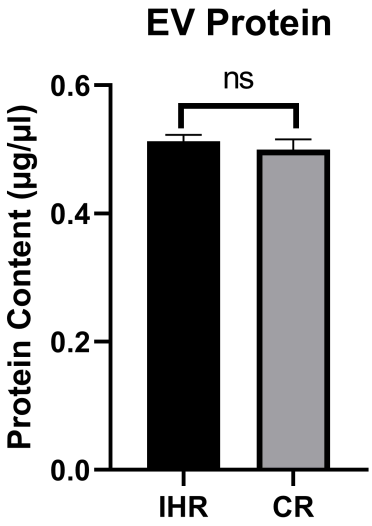


Supplementary Figure 1 Urinary extracellular vesicles (uEVs) Characterisation (*n* = 3/group) Representative Nanoparticle tracking analysis (NTA) showing exosome concentration (particles/mL)/size in pellet.A: uEVs isolated using in-house reagent (IHR); B: uEV isolated using commercial Invitrogen Reagent (CR).

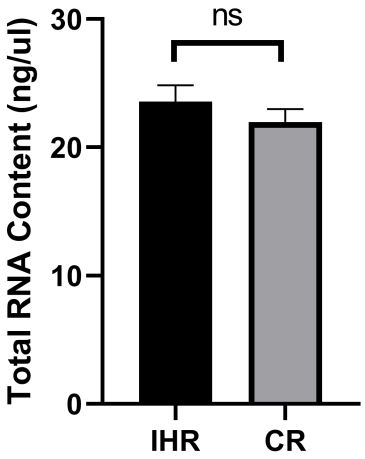


A Anti CD-63 Magnetic Beads B uEV 1 C uEV 2

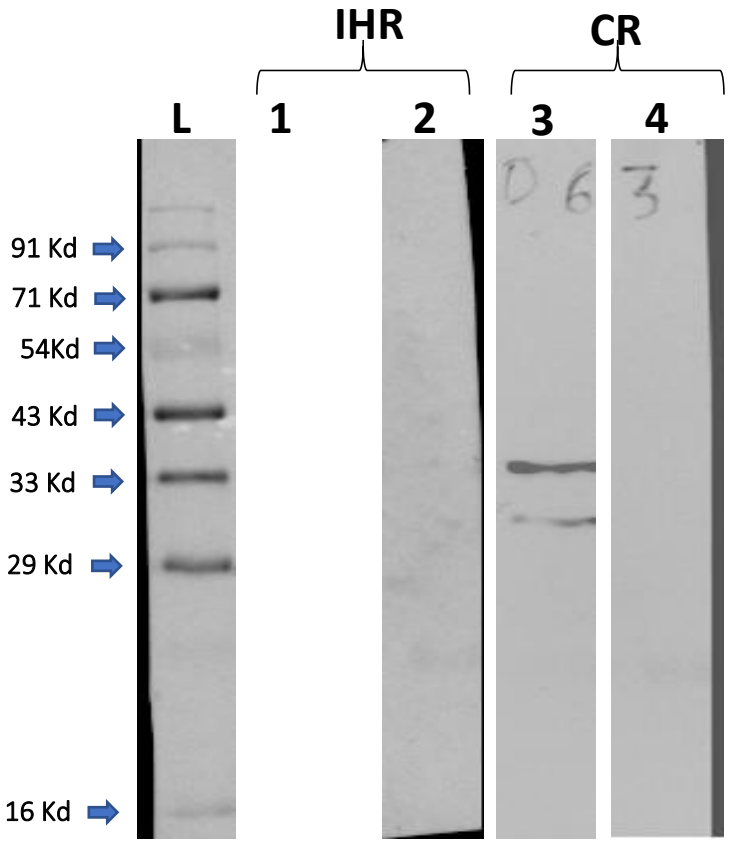
Supplementary Figure 2: Urinary Extracellular Vesicles (uEVs) Characterisation using Flow Cytometry (n=3/group) Representative histogram depicting the expression of CD63 on the surface of uEVs samples (uEV1-using in-house reagent (IHR) and uEV2- using commercial Invitrogen Reagent (CR)) captured on anti-human CD63 magnetic beads using Flow cytometry analysis. A: Unstained anti-human CD63 magnetic beads; B andC: Samples uEV1 and uEV2, captured on anti-human CD63 magnetic beads followed by anti-CD63 primary antibody and stained with detection antibody. Green colour on histogram represents CD63 positive uEV population.



Supplementary Figure 3: Total Urinary Extracellular Vesicles (uEVs) protein content using Pierce ™ BCA Protein assay Kit Histogram depicting the uEV Total RNA concentration using in-house reagent (IHR) and uEV isolated using commercial Invitrogen Reagent (CR) (n=3/group). Statistical significance calculated *t*-test. [a]*P* value <0.05, [b]*P* value< 0.01, [c]*P* value < 0.001.



Supplementary Figure 4 Total Urinary Extracellular Vesicles (uEVs) RNA Concentration Histogram depicting the uEV Total RNA concentration using in-house reagent (IHR) and commercial Invitrogen Reagent (CR) (n=3/group). Statistical significance calculated *t*-test. [a]*P* value <0.05, [b]*P* value< 0.01, [c]*P* value < 0.001.



Supplementary Figure 5 Representative immunoblots showing the expression of CD63 (lane 1 and 3) and Calnexin (lane 2 and 4) in urinary extracellular vesicles (uEVs) isolated using in-house reagent (IHR) and commercial Invitrogen Reagent (CR). L: Protein ladder.

Supplementary Table 1 Shows the average protein concentration of the extracellular vesicle isolated using in-house reagent and commercial invitrogen reagent

Number	Method employed	Total Urine protein concentration (µg/µl)	uEV supernatant total protein concentration (µg/µl)	uEV total protein concentration (µg/µl)
1	In-house reagent (IHR)	8.268 ± 0.432	7.780 ± 0.141	0.205 ± 0.012
2	Commercial Invitrogen Reagent (CR)	8.028 ± 0.064	7.531 ± 0.131	0.226 ± 0.013

Protein concentrations were detected using Pierce ™ BCA Protein assay in total urine, urinary EVs supernatant (non-EV fraction) and uEVs. Values reported as mean ± SD (*n* = 3/group).