Electronic Supplementary Information (ESI)

Cell viability assays

Prior to evaluation of the antiviral activity all samples, a cytotoxicity assay was carried out to investigate the potential cytotoxic effect that they might have on the cells. For this, Caco-2/TC7 cells were incubated with several concentrations of IgG or different enriched dairy preparations and the cytotoxicity was measured using the MTS colorimetric assay.

S1. IgG

As it can be seen in Figure S1, no cytotoxicity was observed in the case of incubation with IgG, although viability increased in all cases in relation to control cells, incubated with the culture medium. This increase might be due to the protein nature of the evaluated samples, which may act as a nutritional supplement for cells, producing an increase in their metabolic activity.

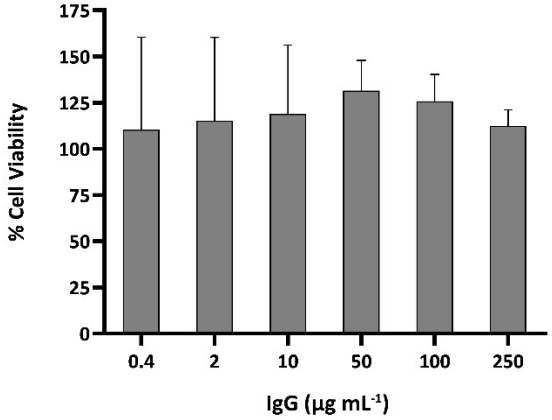

Figure S1: Cell viability of Caco-2/TC7 cells incubated with different concentrations of purified IgG. The values are expressed as a percentage of viability with respect to cells incubated in serum-free culture medium. Results are shown as mean ± standard deviation of duplicates from two independent experiments (n = 4).

S2. Enriched dairy fractions

As seen in Figure S2.A, in the case of whey-based preparations, the mean viability percentages were higher than 100% in all cases, except for the freeze-dried whey fraction and the whey fraction enriched with 2 mg mL^{-1} of IPF, both in the concentration of 0.5 mg of powder mL^{-1}, which showed percentages of viability of 74.8 and 91.6%, respectively. The buttermilk-based preparations (Figure S2.B) had lower cell viability values than the whey-based fractions, although the average metabolic activity remained close to 100% in most cases. Buttermilk samples enriched in IPF (0.5 and 1 mg mL^{-1}) at a concentration of 1.5 mg powder mL^{-1}, buttermilk enriched in 2 mg mL^{-1} IPF and spray-dried at 3 mg powder mL^{-1}, and buttermilk enriched in IgG and spray-dried at 6 mg powder mL^{-1} showed the lowest viability percentages, not being less than 70% in any of the cases.

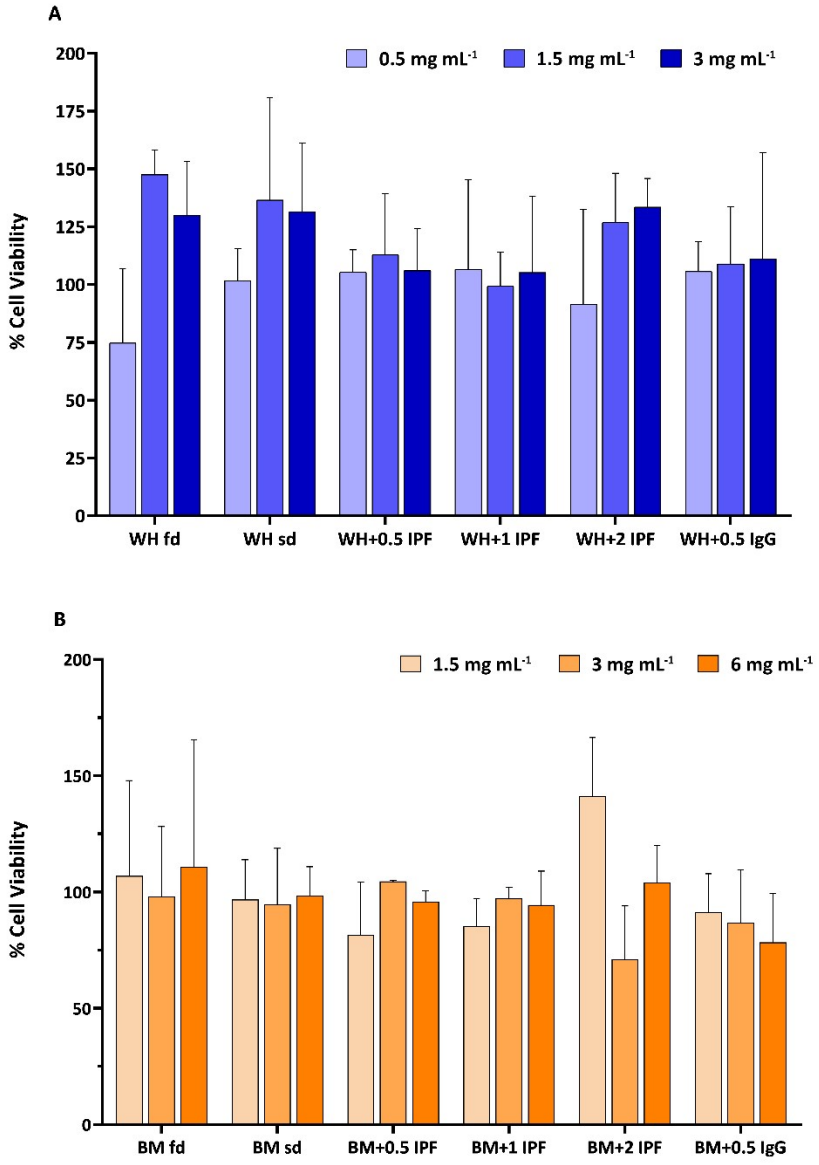

Figure S2: Cell viability of Caco-2/TC7 cells incubated with different milk fractions (A) Whey fractions: freeze-dried whey (WH fd); spray-dried whey (WH sd); whey enriched with 0.5 mg/mL IPF (WH + 0.5 IPF); whey enriched with 1 mg/mL IPF (WH + 1 IPF); whey enriched with 2 mg/mL IPF (WH + 2 IPF); whey enriched with 0.5 mg/mL IgG (WH + 0.5 IgG). (B) Buttermilk fractions: freeze-dried buttermilk (BM fd); spray-dried buttermilk (BM sd); buttermilk enriched with 0.5 mg/mL IPF (BM + 0.5 IPF); buttermilk enriched with 1 mg/mL IPF (BM + 1 IPF); buttermilk enriched with 2 mg/mL IPF (BM + 2 IPF); buttermilk enriched with 0.5 mg/mL IgG (BM + 0.5 IgG). The values are expressed as percentage of cell viability with respect to the control. Results are shown as the mean ± standard deviation of duplicates of two independent experiments (n=4). No significant differences between the cell viability of control and tested samples were found ($p \geq 0.05$).

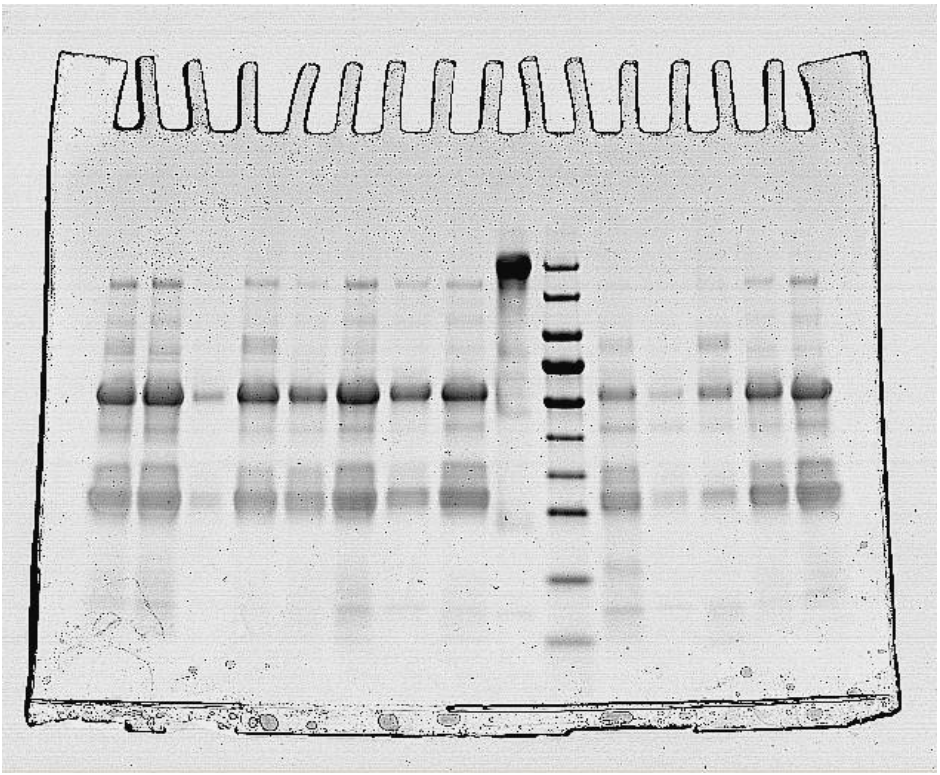

Figure 3: Uncropped gel which corresponds to the image of Figure 1B (only the lanes 10-14)

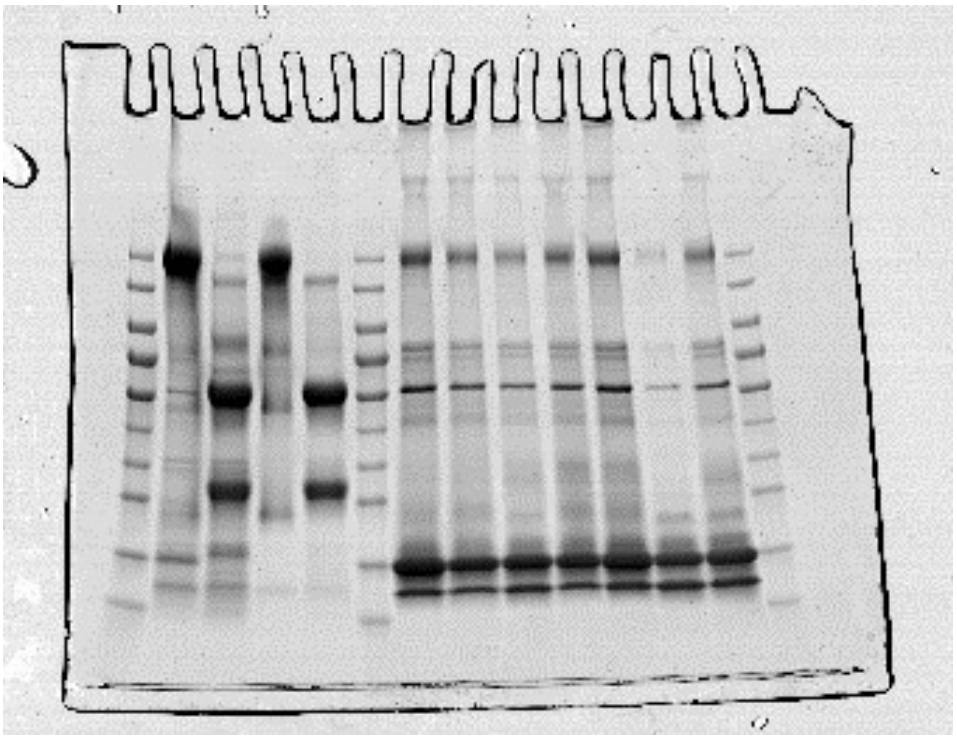

Figure 4: Uncropped gel which corresponds to the image of Figure 1C (only the lanes 1-5)

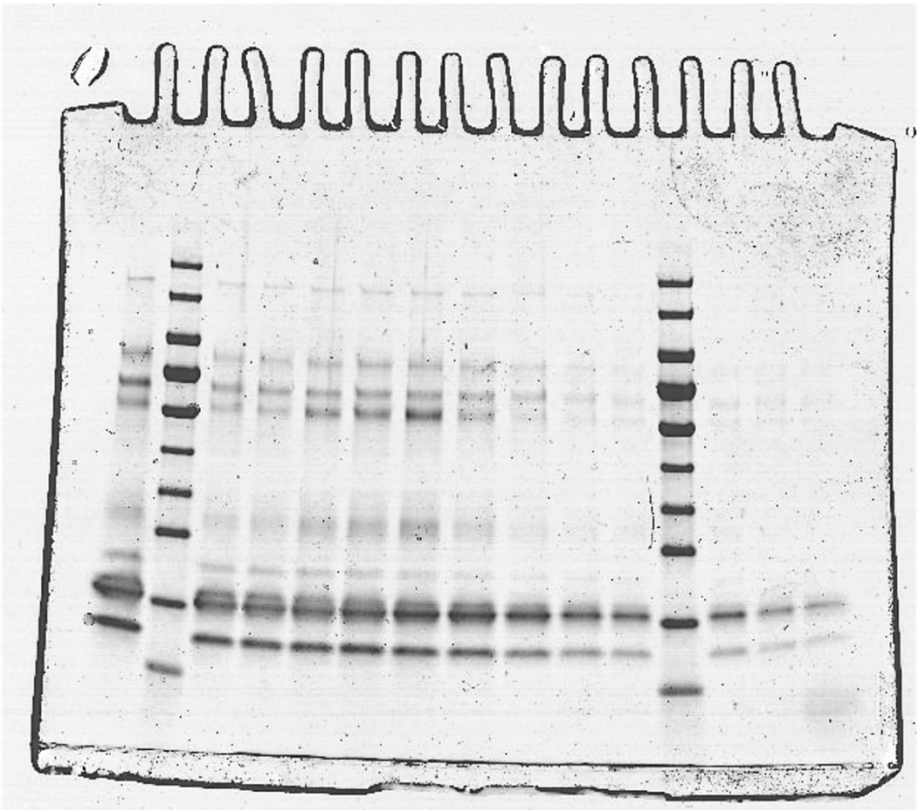

Figure 5: Uncropped gel which corresponds to the image of Figure 2A (only the lanes 2-8)

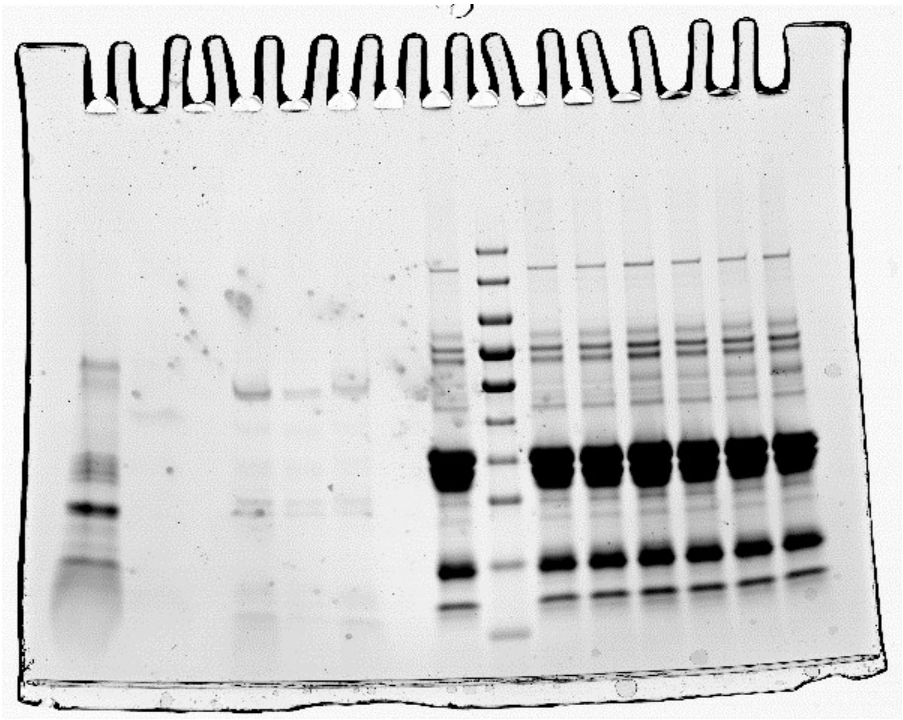

Figure 6: Uncropped gel which corresponds to the image of Figure 2B (only the lanes 9-15)

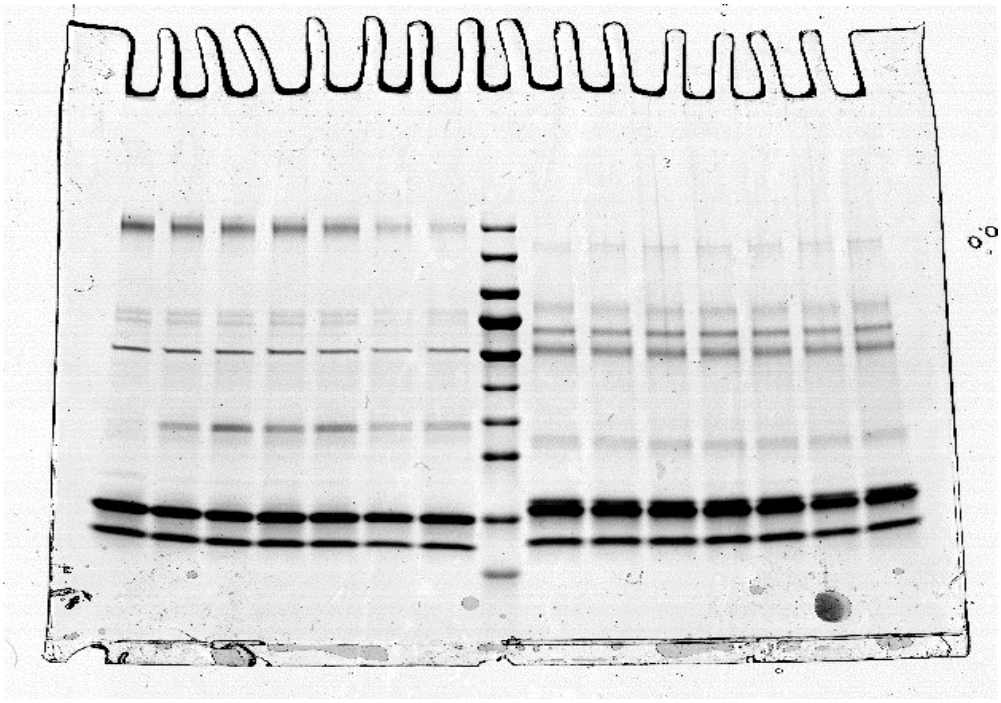

Figure 7: Uncropped gel which corresponds to the image of Figure 7B (all lanes from 1-15)

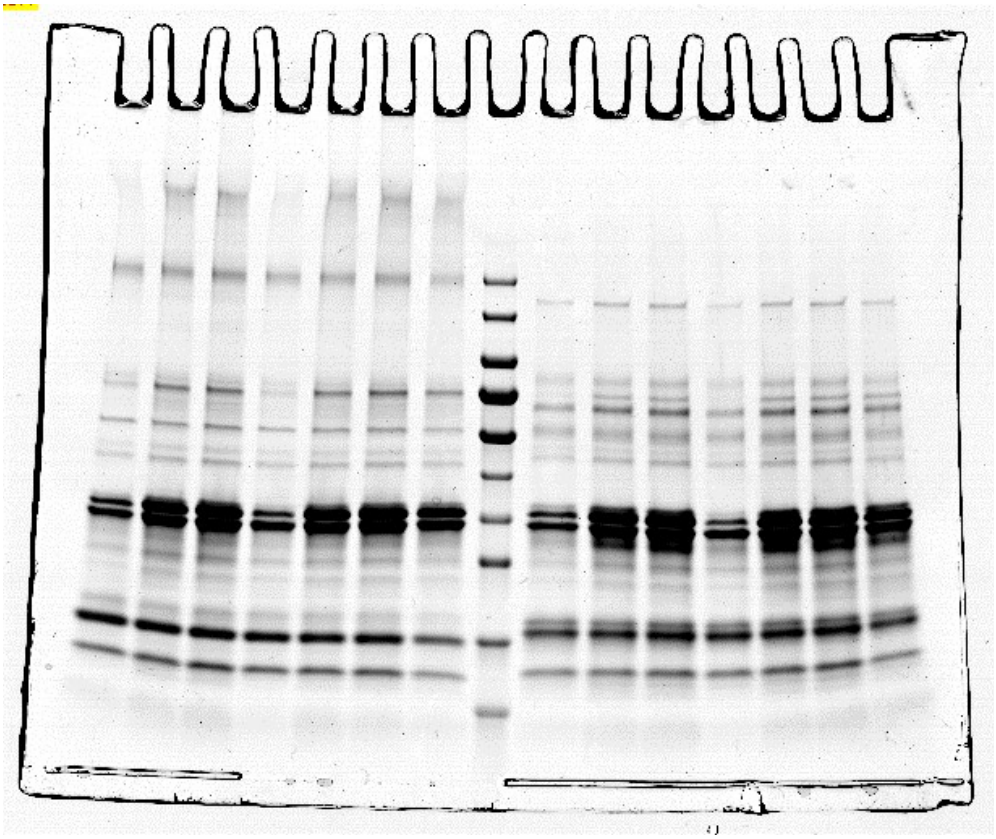

Figure 8: Uncropped gel which corresponds to the image of Figure 8B (all lanes from 1-15)