

Supplementary data for the article:

Ristivojević, M. K.; Grundström, J.; Tran, T. A. T.; Apostolovic, D.; Radoi, V.; Starkhammar, M.; Vukojević, V.; Ćirković Veličković, T.; Hamsten, C.; van Hage, M.  $\alpha$ -Gal on the Protein Surface Affects Uptake and Degradation in Immature Monocyte Derived Dendritic Cells. *Scientific Reports* **2018**, 8 (1). <https://doi.org/10.1038/s41598-018-30887-8>

## Supplementary information

### $\alpha$ -Gal on the protein surface affects uptake and degradation in immature monocyte derived dendritic cells

M. Krstić Ristivojević<sup>1,2,†</sup>, J. Grundström<sup>1,†</sup>, TAT. Tran<sup>1</sup>, D. Apostolović<sup>1</sup>, V. Radoi<sup>3</sup>, M. Starkhammar<sup>4</sup>, V. Vukojević<sup>3</sup>, T. Ćirković Veličković<sup>2,5</sup>, C. Hamsten<sup>1</sup>, M. van Hage<sup>1,\*</sup>

<sup>1</sup>Department of Medicine Solna, Immunology and Allergy Unit, Karolinska Institutet, and University Hospital, Stockholm, Sweden,

<sup>2</sup>Center of Excellence in Molecular Food Sciences, Faculty of Chemistry, University of Belgrade, Belgrade, Serbia,

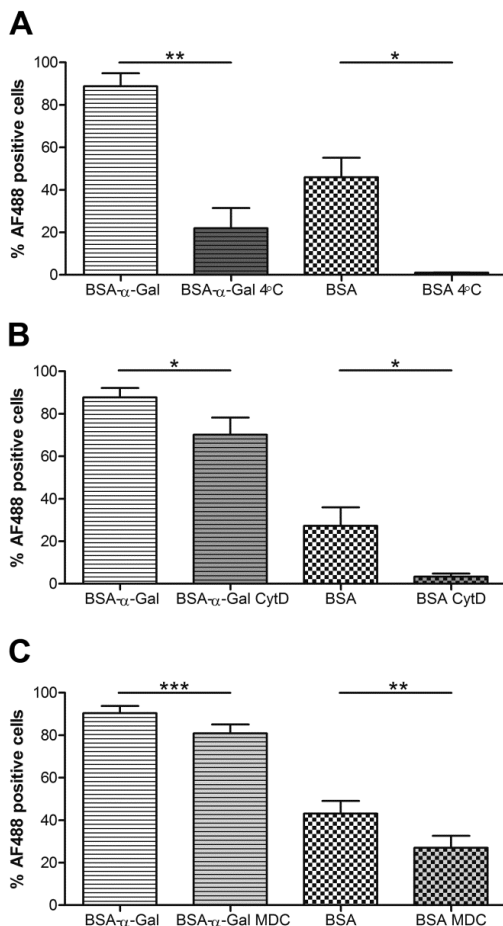
<sup>3</sup>Department of Clinical Neuroscience, Center for Molecular Medicine (CMM), Karolinska Institutet, Stockholm, Sweden.

<sup>4</sup> Department of Internal Medicine, Södersjukhuset, Stockholm, Sweden

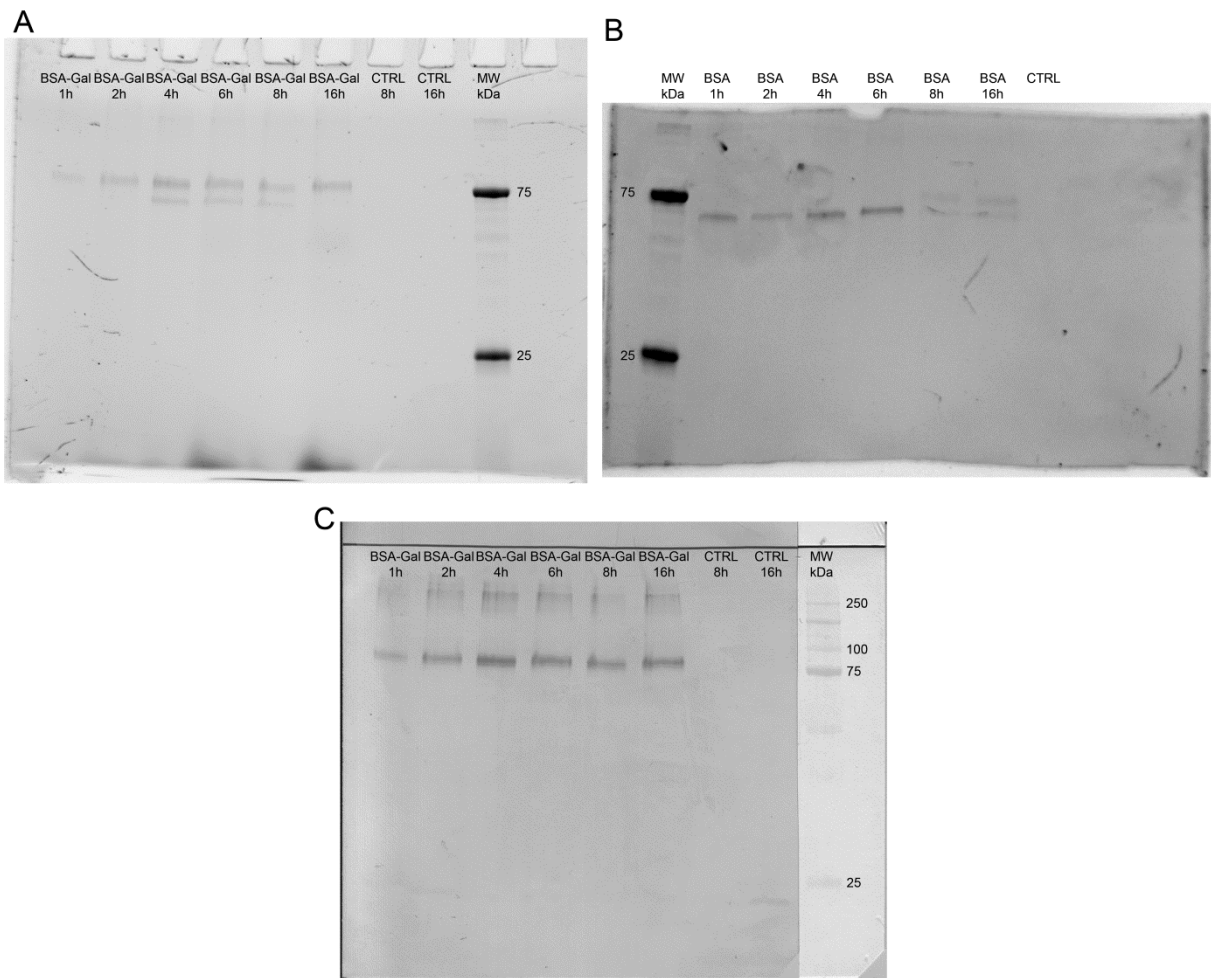
<sup>5</sup>Ghent University Global Campus, Yeonsu-gu, Incheon, South Korea,

† Shared first authorship

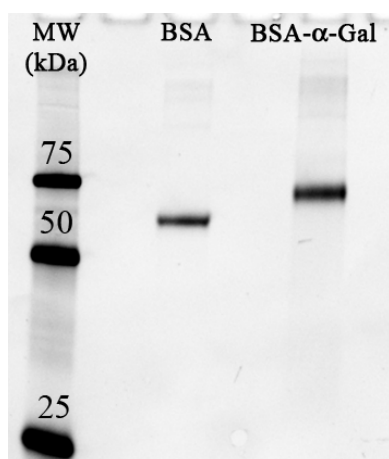
\* Corresponding author



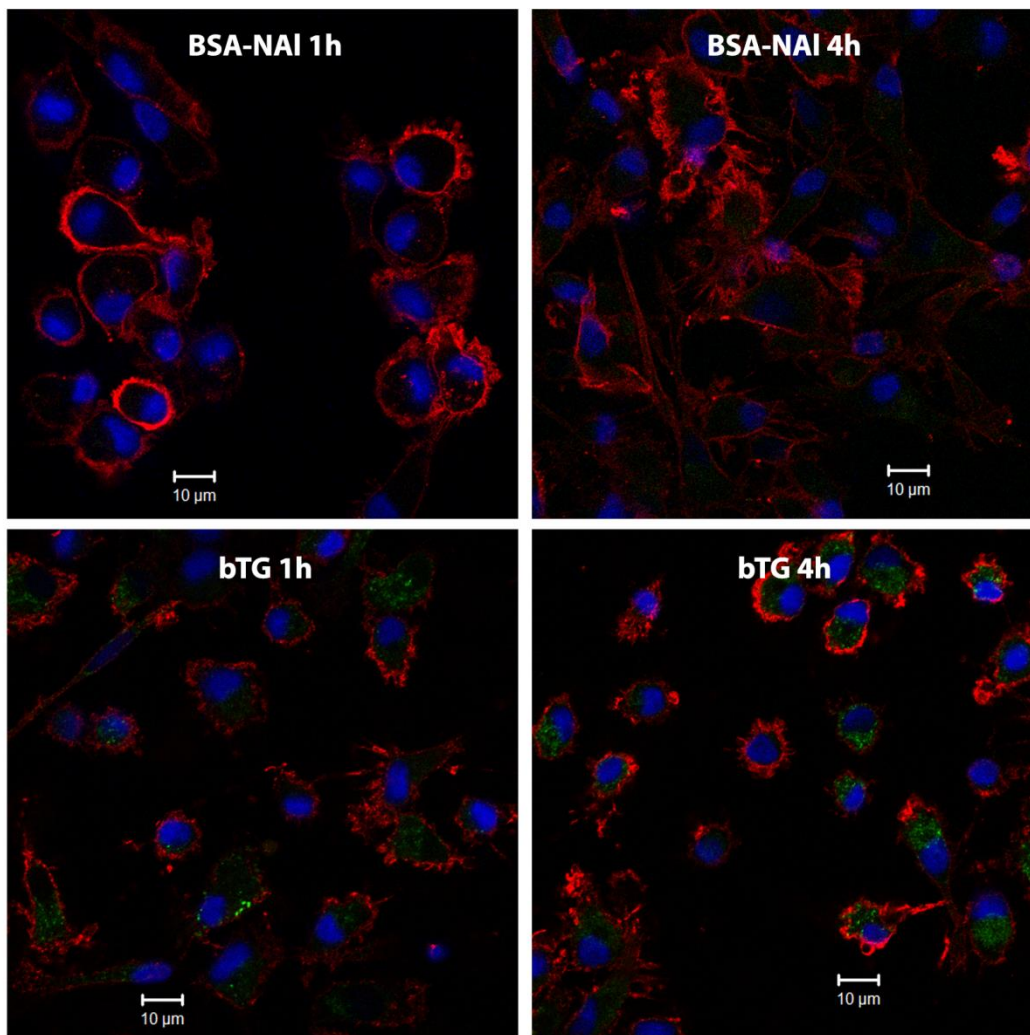
**Supplementary figure S1.** Inhibition of internalization of BSA- $\alpha$ -Gal and BSA in healthy iMDDCs after 4 h of incubation A) at 4°C, n = 4, B) with Cytochalasin D, n = 5 (BSA) and n = 6 (BSA- $\alpha$ -Gal), and C) with Monodansylcadaverine, n = 7. \* = p < 0.05, \*\* = p < 0.01 and \*\*\* = p < 0.001 analyzed by paired t-test.



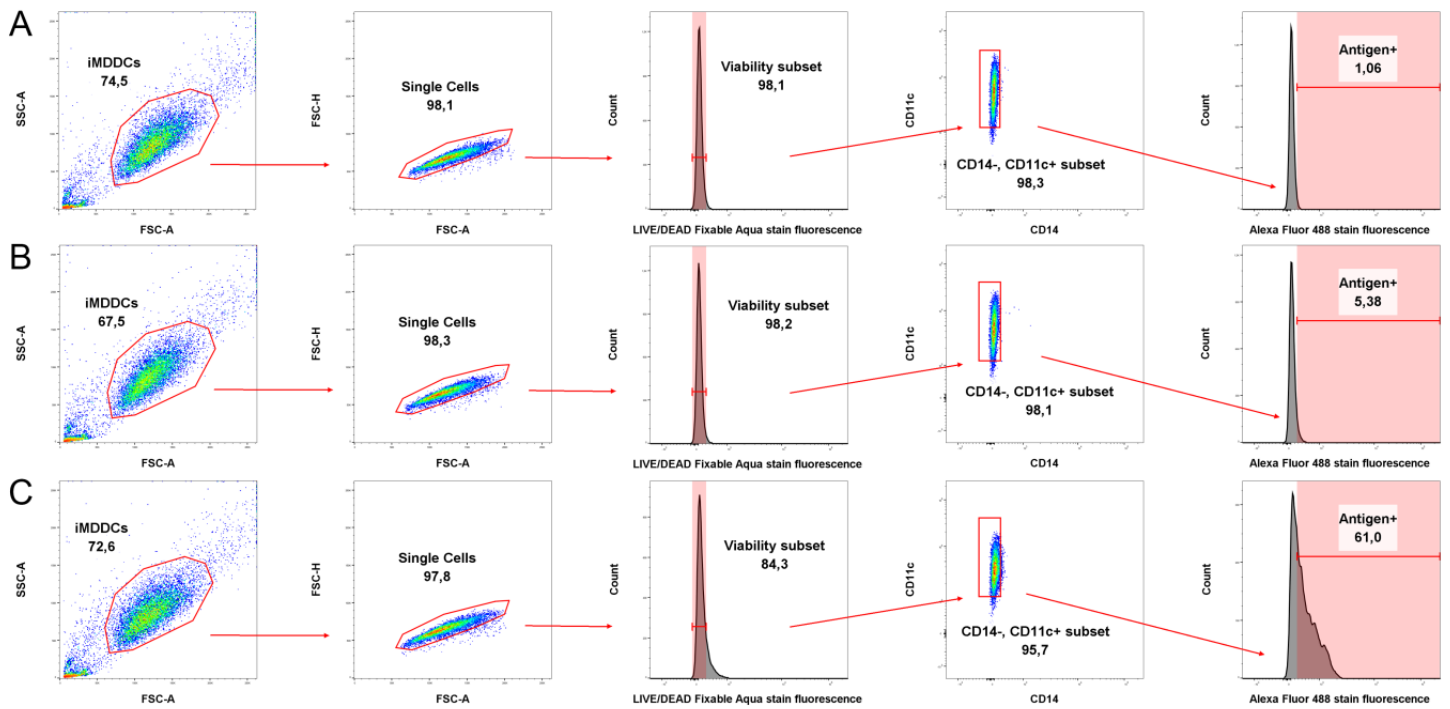
**Supplementary Fig. S2.** A) Fluorescent detection of BSA- $\alpha$ -Gal and BSA in iMDDCs lysates resolved on an SDS-polyacrylamide gel. B) Western blot detection of the  $\alpha$ -Gal epitope in lysates from iMDDCs. iMDDCs were generated from healthy blood donors.



**Supplementary figure S3.** BSA and BSA- $\alpha$ -Gal resolved on a 12% polyacrylamide gel after SDS-PAGE.



**Supplementary figure S4.** Uptake of BSA-Nal (top) and bTG (bottom) after 1 h (left) and 4 h (right) of iMDDC incubation at 37°C analyzed by confocal laser scanning microscopy. Green = BSA-Nal or bTG, red = HLA-DR and blue = DAPI stained nuclei.



**Supplementary figure S5.** Gating strategy for assessment of protein uptake by iMDDCs. A) Negative control, B) BSA and C) BSA- $\alpha$ -Gal. Data analysis was performed using FlowJo version 10 software.