Supplementary figure legends.

Fig S1**. The reaction of HOCl with OVA causes a dose dependent loss of free amines (equation 1) and the formation of aldehydes (equation 2)**. HOCl was incubated with OVA at different ratios (5:1 L, 25:1 I and 250:1 H) and then purified and assayed for the presence of NH2 (A) and CHO (B) groups as described in Materials and Methods.

Fig S2. **Exposure of DC to low concentrations of HOCl does not enhance antigen immunogenicity.** DC were treated with 5μM of HOCl for 1 hour at RT, the cell viability was tested with propidium iodide. HOCl-treated DC or non-treated DC were extensively washed with HBSS and incubated with OVA as described in Fig 1.

Fig S3. **The expression of the Trp-2 antigen in the B16-F10 melanoma.** B16-F10 cells or control CHO cells were lysed in Laemli denaturing sample buffer, fractionated by PAGE and analysed by Western blot using a Trp-2 specific monoclonal antibody (44).

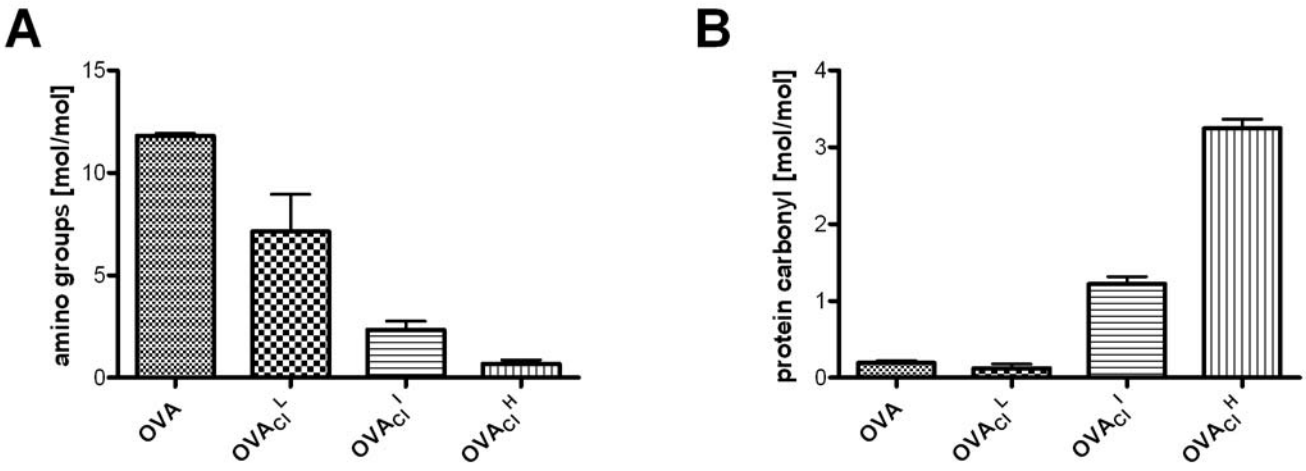
Fig S4. **Removal of carbohydrate residues from OVA and OVA_{Cl}^{I}.** Proteins were treated with PNGase F as described in Material and Methods. Enzyme treated (+) and untreated (-) samples were analysed by 8% PAGE and stained with Coomassie blue.

Fig S5. The three dimensional structure of OVA showing the three T cell epitopes explored in this study.

Fig S6. **Chlorinated OVA still requires processing by aspartic proteinase digestion.** OVA or OVA_{Cl}^{I} (200 μg/ml) were incubated with bone marrow DC in the presence or absence of the aspartic proteinase inhibitor MPC6 (10 μM) for 2 hours. Excess antigen and inhibitor were removed, and the DC were fixed in gluteradehyde and cocultured with OTII cells as in Fig 1C. Proliferation was measured after 18 hours as 3H thymidine incorporation.

Fig S7. **The uptake of OVA and OVA_{Cl}^{I} by DC is blocked at 4^0C.** Details as for fig 6A, but uptake was measured at both 37°C and 4°C, using 100 µg/ml FITC-antigen.

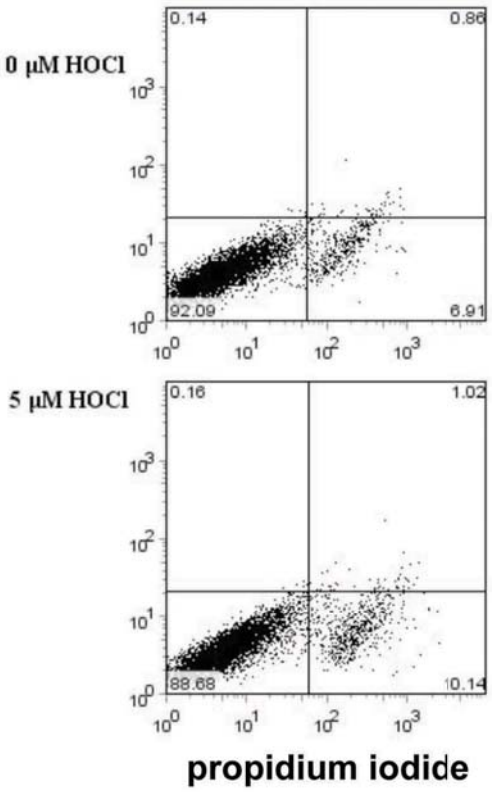
Fig S8. **Antigen uptake by CHO-LOX1 cells.** CHO-LOX1 cells were incubated with 100µg/ml of OVA-FITC or OVA_{Cl}^{i}-FITC for 2 hours at 37°C. Cells were washed with HBSS and stained for LOX-1. Antigen uptake was analysed by confocal imaging as described in Fig 6.

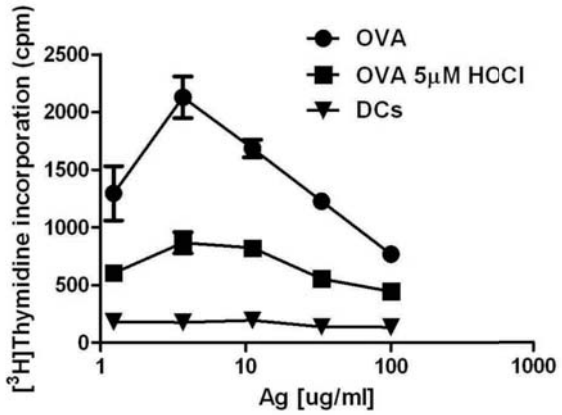


$$RCH_2NH_2 + HOCl \rightarrow RCH_2NHCl + H_2O \qquad \text{(Equation 1)}$$

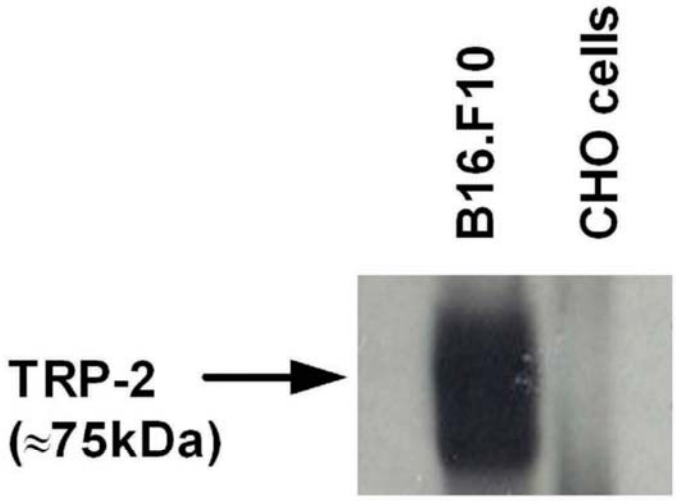
$$RCH_2NH_2 + HOCl \rightarrow RCHO + NH_3 + HCl \qquad \text{(Equation 2)}$$

Supplemental S2





Supplemental S3



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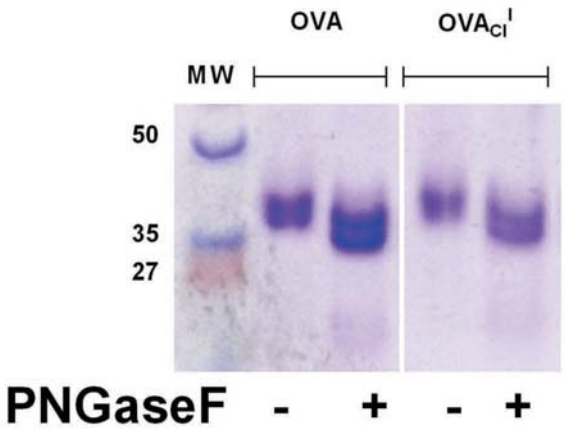
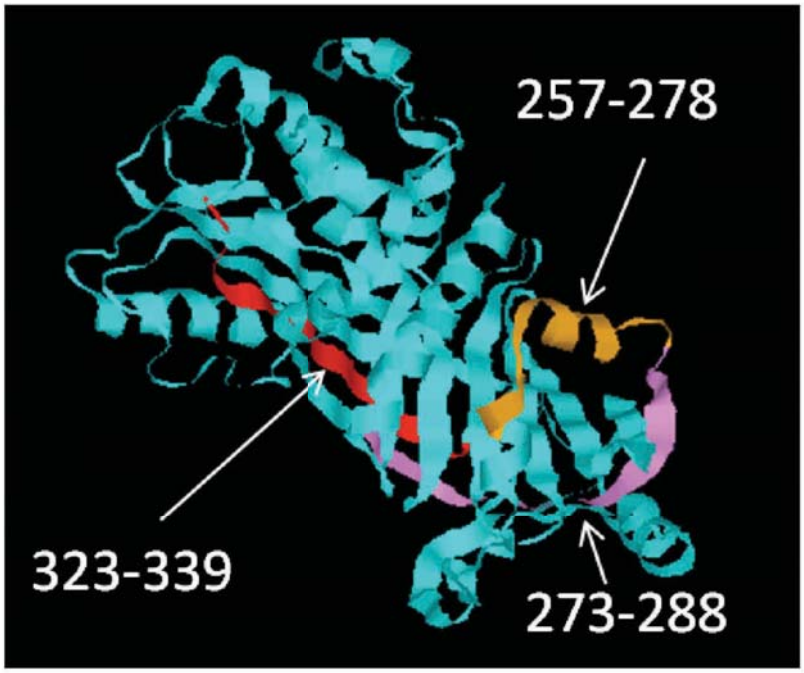


Supplemental S5



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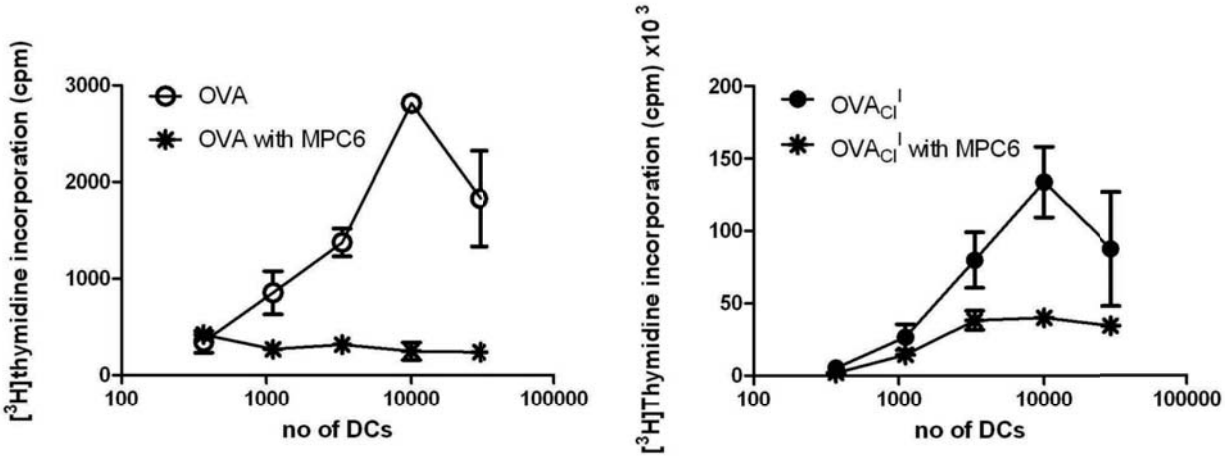
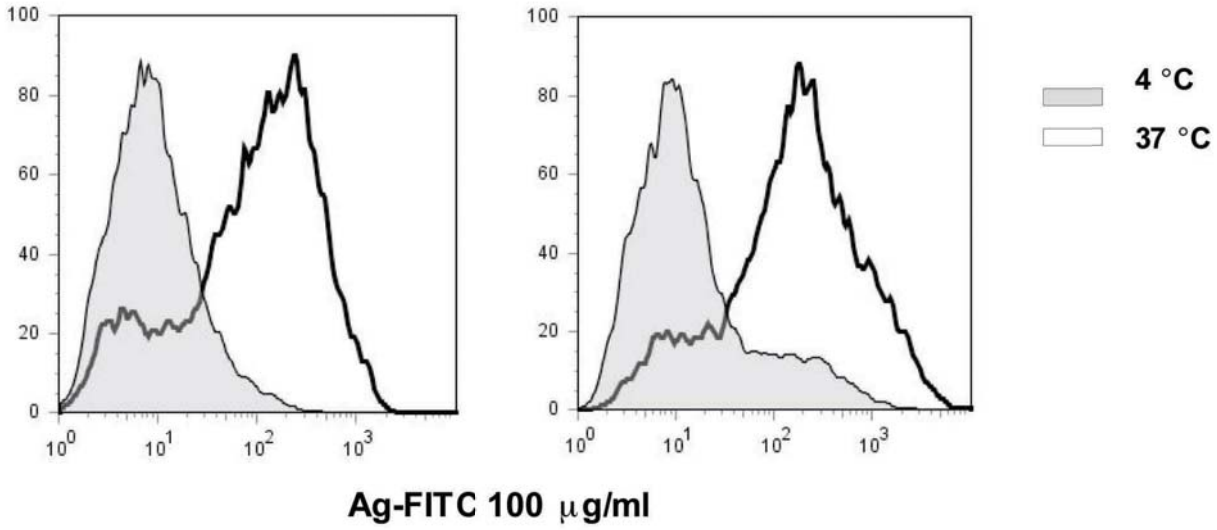


Supplemental S7



Supplemental S8