

**Supplementary figure 1. a** JeKo-1 were treated with 50 nM MC1568 for 4 h, washed, and co-cultured with DN32.D3 and N38-3C3. **b** LCD1d were treated with 10 nM LBH589 for 4 h, washed, and co-cultured with DN32.D3, N38-3C3, and N37-1A12. **c** The table summarizes the different HDACi tested and their functional effects on CD1d and MHC class II-mediated antigen presentation.



**Supplementary figure 2**. a HDAC2 levels were assessed in JeKo-1-shHDAC2 transductants expressing low and high cell surface levels of CD1d. b JeKo-1 cells were treated with TSA and levels of STAT3 and phosphorylated STAT3 (pY705) were assessed by flow cytometry. Black histogram: isotype control mAb. Grey histogram: vehicle. Blue histogram: TSA. c LCD1d cells were treated with IL-10 and induction of STAT3 was confirmed by performing Western blot analysis.