Figure 1. Synergistic effects of toll-like receptor activation and Fc gamma receptor-induced activation (Fcy-TLR cross-talk) in human monocyte-derived dendritic cells and macrophages is dependent on interferon regulatory factor 5 (IRF5).

A, B: Cytokine production (ELISA) of dendritic cells stimulated with toll-like receptor activation, complexed IgG, or the combination for 24 hours. (A) Examples of experiments in triplicate (line at mean). (B) multiple donors, each pair of dots represents one donor. For TNF, IL-1 β and IL-23, grey bars indicate scale change between A and B.

C, D: Effectiveness of IRF5 silencing with small interfering RNA in dendritic cells and macrophages. (C) IRF5 protein expression of unstimulated dendritic cells after IRF5 silencing or non-targeted control silencing (flow cytometry). (D) IRF5 mRNA expression of unstimulated dendritic cells and macrophages after IRF5 silencing: percentage of IRF5 mRNA expression in control silencing conditions (line at mean). E, F: Dendritic cells (E) and macrophages (F) stimulated with toll-like receptor activation, complexed IgG, or the combination for 6 hours, with or without IRF5-silencing. Left: TNF production (ELISA): normalized to TNF production induced by toll-like receptor activation, for each experiment (set to 1): geometric mean ± geometric SD, multiple donors.

Middle: Mean TNF mRNA expression; arbitrary units (AU) normalized to housekeeping gene expression; quantitative RT-PCR.

Right: TNF mRNA expression after 6 hours co-stimulation of control or IRF5-silenced cells, multiple donors. Each pair of dots represents one donor. *p < 0.05, Student's t-test.

