Validation data for Ruxolitinib

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Version 19K16-MM

Ruxolitinib (INCB018424) is an inhibitor of both JAK1 and JAK2, which play a pivotal role in cytokine receptor-mediated signal transduction, including interferon (IFN) signaling. Indeed, extracellular signals from IFNs are transduced by JAK and signal transducer and activator of transcription (STAT) signaling pathway, ultimately leading to the transcription of IFN stimulated genes (ISGs). The ability of Ruxolitinib to inhibit IFN signaling pathway was tested in HEK-Blue™ IFN-α/β cells, which respond to type I and type III IFNs. Results obtained with this cell line show that Ruxolitinib can effectively block the IFN-λ (IL-29) and the IFN-α/β signaling pathway (figure 1).

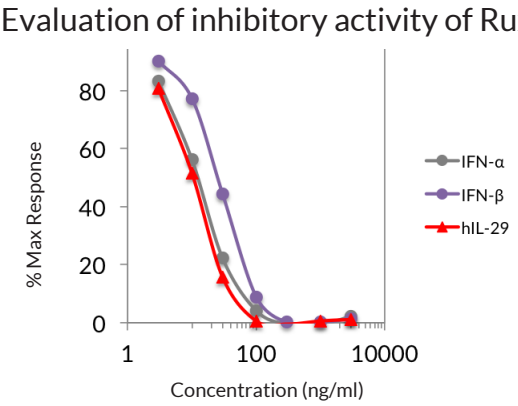

Figure 1. Effect of Ruxolitinib on HEK-Blue™ IFN-α/β cell response to type I and type III IFNs: HEK-Blue™ IFN-α/β cells were incubated with 3 U/ml hIFN-α2b (grey), 1 U/ml hIFN-β1 (purple) or 10 ng/ml hIL-29 (hIFN-λ1) (red) and increasing concentrations of Ruxolitinib. After 24h incubation, IFN-induced ISG activation was assessed by measuring SEAP levels in the supernatant using QUANTI-Blue™. Percentages of maximal response (no inhibitor) for each cytokine are shown.

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