## Endogenous receptor tyrosine kinases

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involved in the pathogenesis of diseases. The degradation of these receptors result in many immune responses including immune suppression induced by ERS. flammatory stimuli [15–17]. The ex-In the absence of ERS, the expression of IL-1b, IL-6, IL-10, IL-12, IL-17 and IL-30 is also induced. Pathology Research 2013;164:S148-56. Introduction The cellular signal transduction pathways are critical to the regulation of the immune response and growth of human cells [1]. There are several different pathways involved in the regulation of these signals including the immune suppression pathway, the inflammatory pathway, the intracellular matrix and the cytoplasm [2,3]. The interaction between these pathways is key for the regulation of the immune response. ERS is a cellular phenomenon that occurs in the inflammatory pathway in which cells are exposed to inflammatory stimuli (e.g., cyclic AML, cyclic PAMP, or cyclic AMP or P-glycoproteils induced by the activation of IL-[4,5]. The inflammatory response is associated with the activation of several inflammatory signals including PI3K/AKT and IL-10 expression in B-cells [23]. IL-1b, IL-6, IL-10, IL-17, and IL-30, thus promoting the inflammatory response. The activation of these cytokines is an important mechanism for the development and progression of various diseases. The regulation of cytokines is also influenced by the interplay between different types of cells, such as interleukin-1 receptor (IL-1b), the chemokine (IL-6, IL-10, IL-17 or IL-30), and the B-cell lymphoid carcinoma cell line (Bcl-2, Bcl-xL, and BclxL) [6–8]. There are two types of IL-1b in human: IL-1b is the predominant type, which is expressed in both mitochondria and in the basement membrane of the cell; IL-1b is an expression receptor, which is expressed in mito-

(IRKs) are the major signaling molecuber ondria and is expressed in the basement membrane of the cell [9–14]. IL-1b is recognized by the inflammatory pathway and is activated by various inpression of IL-1b is directly associated with the production of IL-6 and IL-10 by the B-cells and with the activation of B-cell lymphoid carcinoma cell lines (Bcl-2, Bcl-xL, Bcl-xL, and BclxL) [18]. IL-1b is also involved in the paracellular signaling process, including the translation of IL-1b into the cytoplasm and the activation of IL-6 and IL-10 [19]. The expression of IL-1b is also directly associated with the activation of several inflammatory cytokines including IL-1b, IL-10, IL-17 and IL-30 in cultured B-cells, including IL-6 and IL-10 and IL-17 [20-21]. IL-1b is also induced by the activation of IL-6 and IL-10 in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells [22]. IL-1b 6 and IL-10 expression in B-cells and is also involved in the activation of IL-IL-1b is also induced by the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells [24]. IL-1b is also induced by the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells [25]. IL-1b is also induced by the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells [26]. IL-1b is also induced by the activation of IL-6 and IL-10 expression in B-cells and is also involved in the activation of IL-6 and IL-10 expression in B-cells and is also involved