Abstract

Interleukin (IL) 25 is a proinflammatory cytokine that promotes a Th2-type cell response. Its alternate name is IL-17E, and along with 5 other members, IL-25 belongs to the family of cytokine IL-17. The family is based on the similarity of their amino acid sequences. The source and target cells of IL-25 include many different cell types. IL-25 is not only produced by many types of immune cells, but epithelial and Paneth cells are involved in its production as well. Its receptors form heterodimers composed of 2 subunits - IL-17RA and IL-17RB. Both receptor proteins are required for IL-25 mediated activities and occur in other IL-17 family members. IL-25 also plays an important role in allergies - one of the most common diseases in developed countries. Cytokine IL-25 has been studied primarily in asthma. However, other very common types of allergies, such as food allergies, atopic dermatitis and allergic rhinitis, can not be overlooked. Even in these cases, the role of IL-25 is not negligible and is studied. Based on the knowledge of IL-25 biology and its role in allergies, this cytokine may be an important therapeutic target in the treatment of allergic diseases. One possibility is, for example, the use of neutralizing antibody and subsequent blocking of IL-25 activity.

Key words:
interleukin-25, cytokines, allergic diseases, inflammation, asthma, Th2 response