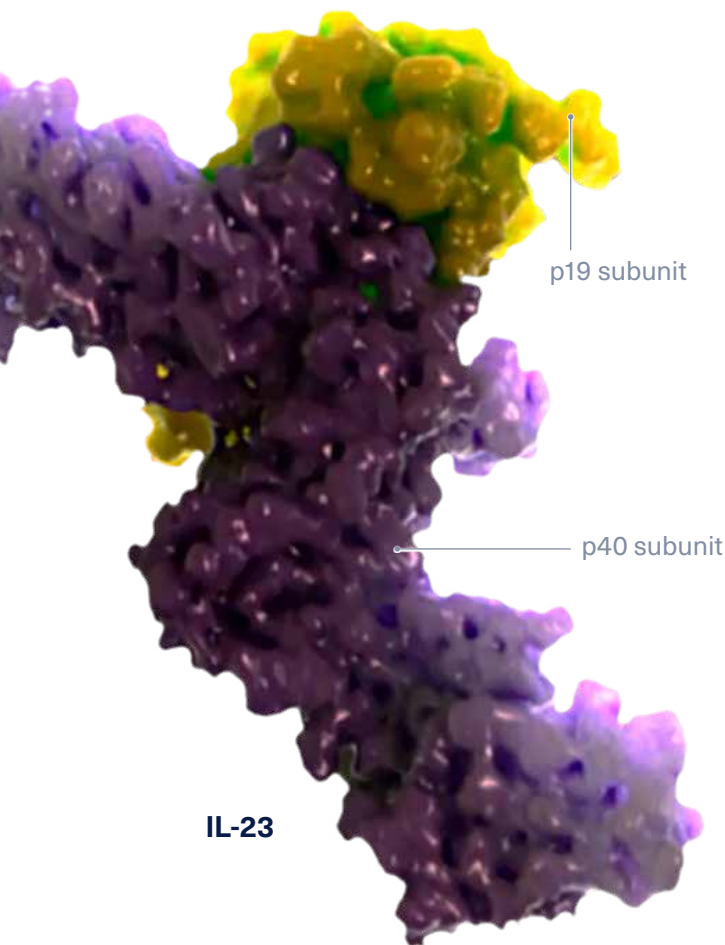


# The Role of IL-23 in Ulcerative Colitis



## About Interleukin-23

Interleukin-23 (IL-23) is a key signaling molecule (also known as a cytokine) involved in inflammatory processes.<sup>1</sup> IL-23 is produced by immune cells that survey the intestinal environment, such as dendritic cells and macrophages, in response to signals in the gut.<sup>1,2</sup> It is thought to be linked to multiple chronic immune-mediated diseases, including inflammatory bowel disease (IBD).<sup>1,2</sup>

As a member of the IL-12 family of cytokines, IL-23 has pro-inflammatory properties.<sup>2</sup> IL-23 is composed of two subunits – p40, which is shared with IL-12, and p19, which is unique to IL-23.<sup>1</sup>

## About IL-23 and Immune Functions

IL-23 is produced by a network of immune cells in the gut.<sup>1,2</sup>

When IL-23 binds to its receptor, it signals through the JAK-STAT pathway via STAT3 and activates inflammation-inducing functions of T helper 17 (Th17) cells.<sup>1,2</sup>

Once activated, Th17 cells release pro-inflammatory cytokines, including IL-17A and IL-17F, TNF $\alpha$ , IL-22, IL-26, and interferon gamma, which trigger inflammation.<sup>2-4</sup>

## Ulcerative Colitis and the Immune System

IL-23 plays a key role in the development of IBD by influencing mucosal immunity, as IL-23 suppresses T-cells which typically regulate inflammation.<sup>1,2</sup>

Ulcerative colitis is a chronic inflammatory disease of the colon and rectum that affects the lining of the colon and causes small sores, or ulcers, to form.<sup>5</sup> Ulcerative colitis symptoms can vary, depending on the severity of inflammation, including rectal bleeding, bowel-movement urgency, and abdominal pain.<sup>6</sup>

Increased levels of IL-23 and Th17 cell cytokines have been found in intestinal mucosa, plasma, and serum of patients with IBD.<sup>1</sup>

## AbbVie in Gastroenterology

With a robust clinical trial program, AbbVie is committed to cutting-edge research in IBD, including ulcerative colitis and Crohn's disease. By innovating, learning and adapting, AbbVie aspires to make a positive long-term impact on the lives of people with IBD.



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