

Tumor necrosis factor (TNF) • Tumor necrosis factor (TNF) is a multifunctional cytokine that plays important roles in diverse cellular events such as cell survival, proliferation, differentiation, and death. • TNF Tumor necrosis factor is secreted by inflammatory cells, which may be involved in inflammation-associated carcinogenesis. • Tumor necrosis factor alpha (TNF- $\alpha$ ) is a cytokine with pleiotropic effects on various cell types. • Transforming growth factor-beta (TGF- $\beta$ ) is a secreted cytokine that intricately controls many physiological and pathological processes