



Product Datasheet

Product Name	Recombinant Human Tumor Necrosis Factor Receptor
Cata No	CB500324
Source	<i>Chinese Hamster Ovarian Cells (CHO)</i>
Synonyms	Tumor necrosis factor receptor superfamily member 1B, Tumor necrosis factor receptor 2, TNF-R2, Tumor necrosis factor receptor type II, p75, p80 TNF-alpha receptor, CD120b antigen, Etanercept, TBPII, TNFBR, TNFR80, TNF-R75, p75TNFR, TNF-R-II.

Description

TNFR binds specifically to tumor necrosis factor (TNF) and blocks its interaction with cell surface TNF receptors. TNF is a naturally occurring cytokine that is involved in normal inflammatory and immune responses. It plays an important role in the inflammatory processes of rheumatoid arthritis (RA), polyarticular-course juvenile rheumatoid arthritis (JRA), and ankylosing spondylitis and the resulting joint pathology. In addition, TNF plays a role in the inflammatory process of plaque psoriasis. Elevated levels of TNF are found in involved tissues and fluids of patients with RA, psoriatic arthritis, ankylosing spondylitis (AS), and plaque psoriasis. Two distinct receptors for TNF (TNFRs), a 55 kilodalton protein (p55) and a 75 kilodalton protein (p75), exist naturally as monomeric molecules on cell surfaces and in soluble forms. Biological activity of TNF is dependent upon binding to either cell surface TNFR. Recombinant Human TNFR is a dimeric soluble form of the p75 TNF receptor that can bind to two TNF molecules.

It inhibits the activity of TNF in vitro and has been shown to affect several animal models of inflammation, including murine collagen-induced arthritis. TNFR inhibits binding of both TNF α and TNF β (lymphotoxin alpha [LT α]) to cell surface TNFRs, rendering TNF biologically inactive. Cells expressing transmembrane TNF that bind to TNFR

are not lysed in vitro in the presence or absence of complement.

TNFR can also modulate biological responses that are induced or regulated by TNF, including expression of adhesion molecules responsible for leukocyte migration (i.e., E-selectin and to a lesser extent intercellular adhesion molecule-1 [ICAM-1]), serum levels of cytokines (e.g., IL-6), and serum levels of matrix metalloproteinase-3 (MMP-3 or stromelysin).

Purity

Greater than 98.0% as determined by Gel Electrophoresis

Activity

Potency is determined by its ability to neutralize TNF-alpha mediated growth inhibition of A375 cells, corresponding to a Specific Activity of 1.7×10^7 IU/mg. Each mg contains 1.6mg mannitol, 0.4 mg sucrose and 48 μ g tromethamine.

Storage

Lyophilized Tumor Necrosis Factor Receptor although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNFR should be stored at 4°C between 2-7 days and for future use below -18°C.

