



## IVTScrip™ pT7-VEE-mRNA-TNF Vector

Cat. No.: GTVCR-WQ008MR

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

#### Product overview

The vector is an effective transcription system suitable for a variety of research, including the in vitro translation, self-amplifying mRNA studies and protein expression. The system was driven by the T7 promoter to efficiently generate TNF mRNA through T7 RNA polymerase and nucleotides under appropriate reaction conditions. The vector contains the self-replicating Venezuelan equine encephalitis (VEE) virus RNA replicon, which resulting the mRNA expression at a high level.

#### Specifications

<b>Promoter</b>	T7
<b>5' UTR</b>	Kozak seq
<b>Resistance</b>	Ampicillin
<b>Species</b>	Human
<b>RefSeq</b>	NM_000594.4
<b>Applications</b>	IVT; Self-amplifying mRNA (SAM) research; Gene therapy research
<b>Format</b>	Solution
<b>Concentration</b>	1 µg/µl
<b>Quantity</b>	10 µg

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## GENE INFORMATION

<b>Alternative Names</b>	DIF; TNFA; TNFSF2; TNLG1F; TNF-alpha
<b>Description</b>	<p>This gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, psoriasis, rheumatoid arthritis ankylosing spondylitis, tuberculosis, autosomal dominant polycystic kidney disease, and cancer. Mutations in this gene affect susceptibility to cerebral malaria, septic shock, and Alzheimer disease. Knockout studies in mice also suggested the neuroprotective function of this cytokine.</p>