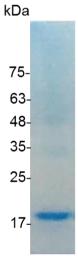
## PRODUCT INFORMATION

## Croyez GMP® TNF alpha (Tumor necrosis factor alpha), Human

Catalog number	C01047-GMP-100 / C01047-GMP-1000
Package	100 μg / 1 mg
Description	Tumor necrosis factor alpha (TNF alpha) is a kind of pleiotropic pro-inflammatory cytokine. It is secreted by various cells, such as adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts. Proteolysis of the integral membrane precursor form of TNF alpha from cells soluble can release homotrimeric TNF alpha. TNF alpha can bind with some TNF alpha receptors induces apoptosis, besides, also trigger other responses depending on cell type, receptor expression, and signal transduction status. TNF alpha participate in the inflammatory response.
Source	Escherichia coli Animal-free reagent and laboratory Manufactured and tested under GMP guideline
Sequence	MVRSSSRTPSDKPVAHVVANPQAEGQLQWLNRRANALLANGVELRDNQLVVP SEGLYLIYSQVLFKGQGCPSTHVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPE GAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL with polyhistidine tag at the C-terminus
Endotoxin level	<0.1 EU per 1 μg of the protein by the LAL method.
Activity	Measure by its ability to induce cytotoxicity in L929 cells in the presence of actinomycin D. The ED $_{50}$ for this effect is <0.2 pg/mL. The specific activity of recombinant human TNF alpha is approximately >9 x $10^9$ IU/mg.
Purity	>98% as determined by SDS-PAGE. Purified by Ni-NTA chromatography.
Formulation	The protein was lyophilized from a solution containing 1X PBS, pH 8.0.
Reconstitution	It is recommended to reconstitute the lyophilized protein in sterile $H_2O$ to a concentration not less than 100 $\mu$ g/mL and incubate the stock solution for at least 20 min to ensure sufficient re-dissolved.
Storage	Lyophilized protein should be stored at -20°C. This product is stable for one year upon receipt, when handled and stored as instructed. Upon reconstitution, protein aliquots should be stored at -20°C or -80°C. Avoid repeated freeze/thaw cycles.
Note	Please use within one month after protein reconstitution.
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Specification	Croyez GMP® recombinant proteins are manufactured in ISO 13485:2016 and
	GMP-certified facility. The processes include:
	<ul> <li>Testing and traceability of raw material</li> </ul>
	<ul> <li>Records of the maintenance and equipment calibration</li> </ul>
	<ul> <li>Personnel training records</li> </ul>
	Batch-to-batch consistency
	<ul> <li>Documentation of QA control and process changes</li> </ul>
	● Manufactured and tested under an ISO 13485:2016 certified quality
	management system
	Stability monitor of product shelf-life
Reference	1. Idriss HT., Naismith JH. (2000) <i>Microsc Res Tech.</i> 50,3: 184-95.
	2. Palladino MA. et al. (2003) Nat Rev Drug Discov. 2,9: 736-46.
	3. Balkwill F. (2006) Cancer Metastasis Rev. 25,3: 409-16
	4. van Horssen R. et al. (2006) Oncologist. 11,4: 397-408.



SDS-PAGE analysis of Croyez GMP® TNF alpha, Human

For Research Use Only. Not for use in diagnostic or therapeutic procedures.