

OK432

Product Name

OK432

Size/Catalog Number

100µg / GMP-TL107-0100

500µg / GMP-TL107-0500

Product Information

Activity: OK432-activated NK cells exhibit a cytotoxicity index (T-C) of $\geq 15\%$.**Formulation:** Lyophilized powder

Background

OK432 is an immunomodulatory agent produced through the lyophilization of Group A *Streptococcus pyogenes*. It activates neutrophils, enabling them to effectively kill tumor cells pretreated with IFN- γ or TNF- α . This cytotoxic effect is mediated by the interaction between CD11b/CD18 on neutrophils and ICAM-1 expressed on tumor cells. Furthermore, OK432 stimulates monocytes to enhance their tumoricidal activity against autologous cancer cells. In lymphocytes, OK432 induces lymphokine-activated killer (LAK) cell activity, which demonstrates potent cytotoxicity even against NK-resistant tumor cells. Due to its immunomodulatory and antitumor properties, OK432 is suitable for the development and production of cell-based therapeutics.

OK432 is standardized in Klinische Einheit (KE), a clinical unit of biological activity. The potency is defined such that 1 KE is equivalent to 0.1 mg of the lyophilized bacterial product.

Stability & Storage

Lyophilized powder: Stable for 24 months at 2-8°C in the original.**Reconstitution:** Dissolve in sterile Water for Injection, 0.9% NaCl, or PBS (pH 7.4) maintaining final concentration ≥ 100 µg/mL to prevent adsorption.**Handling:** Aliquot to avoid repeated freeze-thaw cycles.

References

1. Sakamoto N, Ishikawa T, Kokura S, Okayama T, Oka K, Ideno M, Sakai F, Kato A, Tanabe M, Enoki T, Mineno J, Naito Y, Itoh Y, Yoshikawa T. Phase I clinical trial of autologous NK cell therapy using novel expansion method in patients with advanced digestive cancer. *J Transl Med.* 2015 Aug 25;13:277.
2. Pan K, Lv L, Zheng HX, Zhao JJ, Pan QZ, Li JJ, Weng DS, Wang DD, Jiang SS, Chang AE, Li Q, Xia JC. OK-432 synergizes with IFN- γ to confer dendritic cells with enhanced antitumor immunity. *Immunol Cell Biol.* 2014 Mar;92(3):263-74.
3. Sudo T, Aruga A, Shimizu K, Matsushita N, Takasaki K. OK432-activated natural killer cells enhanced trastuzumab (Herceptin)-mediated antibody-dependent cellular cytotoxicity in patients with advanced cancer. *Anticancer Res.* 2006 Nov-Dec;26(6B):4327-33.

Intended Use

For research and manufacturing purposes only.