Cat No: abk6192M
Format: Lyophilized Technical Grade

RECOMBINANT BIOACTIVE CYTOKINE

Interferon-γ, Mouse (mIFN-γ)

Highly purified E. coli-expressed macrophage-activating factor

PRODUCT SPECIFICATIONS

Species Target	Mouse (Mus musculus)
Sequence Config	Expressed with an N-terminal Met.
Expression Core	Escherichia coli (E. coli)
Sequence Purity	> 95% evaluated via SDS-PAGE homogeneity
Molecular Weight	~15 kDa under reducing SDS-PAGE conditions
Endotoxin Load	< 1 EU/μg of protein (Gel Clot Method)
Formulation	Lyophilized following extensive dialysis against PBS.

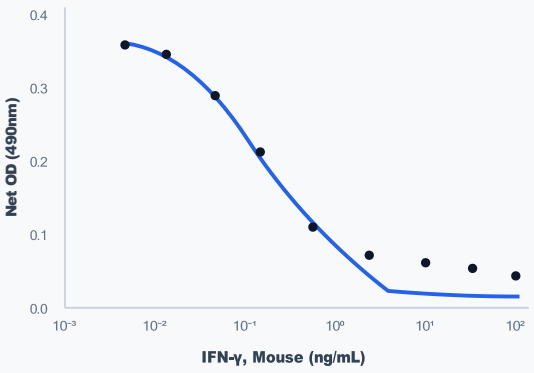

Figure 1: Dose-dependent cytotoxicity validation curve mapping Net OD vs concentration. Activity profile presents an ED_{50} < 0.15 ng/mL using responsive WEHI-279 cell bio-assays.

Biological Activity	**ED_{50} < 0.15 ng/mL**, comprehensively verified via automated cell-based cytotoxicity validation assays using WEHI-279 indicator cells.
Reconstitution Protocol	Pulse-centrifuge vial prior to opening to fully consolidate target material at base. Reconstitute the lyophilized cake matrices cleanly in sterile ultra-pure ddH_2O or PBS media to stock concentrations up to 100 μg/mL.
Handling & Storage	• **Ambient/Unreconstituted:** Maintained sterilely stable for up to 6 months when archived below -70°C. • **Post-Reconstitution:** Stable for a duration of 1 week stored at 4°C, or up to 3 months when stored at -20°C. • **Long-Term Strategy:** Supplement reconstitution vehicles with an inert carrier protein matrix (e.g., 0.1% Protease-Free BSA). **CRITICAL: Do not subject reconstituted fluid volumes to recurrent freeze-thaw cycles.**

BIOLOGICAL BACKGROUND & PATHWAYS

Mouse Interferon- gamma (mIFN-γ) acts structurally as a critical macrophage-activating agent. The physiological native active structure operates exclusively as an antiparallel homodimer, signaling through the canonical **IFN-γ / JAK / STAT molecular cascading pathway**.

Downstream signaling cascade pathways mediate vital biological control mechanisms heavily focused on innate host cellular defense models and adaptive immune regulation. Key processes include broad anti-viral orchestration, intracellular anti-bacterial barriers, programed apoptosis stimulation, inflammation regulation, and cross-coordination of both innate and acquired adaptive immune network architectures.

While the localized IFN-γ-mediated molecular cascade selectively recruits vital cellular components–such as resident macrophages, natural killer (NK) cells, and specialized cytotoxic T lymphocytes (CTLs)–sustained aberrant signaling has also been increasingly mapped as a prominent mechanism fostering target cell resistance to NK and CTL attacks, driving modern immune evasion characteristics across diverse cancer lineages.

> **SYNONYMS & GENE ARCHITECTURE DESCRIPTORS**
>
> Immune Interferon; type II interferon; T cell interferon; MAF; IFNG; IFG; IFI; IFN-gamma

REGULATORY & PRODUCT SAFETY DECLARATION

This product is developed, engineered, and packaged strictly for ex vivo laboratory research use and specialized scientific evaluations. It is completely prohibited and unsafe for direct human diagnostic applications, home clinical trials, internal consumption, veterinary clinical therapy, or systemic medical injections.