

Recombinant human IL-2 protein (Qk089-CTG)



Type: Cell Therapy Grade

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Interleukin-2 (IL-2) is a vital cytokine that regulates immune responses by promoting the growth and activation of T-cells, enhancing immune function, and maintaining immune tolerance for immune activation and suppression. In cell therapy development IL-2 is used in the expansion of CAR-T cells and other T cell therapies.

Qkine has optimized the IL-2 manufacture process to produce a highly bioactive protein with excellent lot-to-lot consistency for enhanced experimental reproducibility. Cell therapy grade IL-2 is a highly pure [animal origin-free](#) 15.5 kDa monomer.

Qkine [cell therapy grade](#) high purity animal origin-free proteins are manufactured as GMP grade equivalents in an ISO 9001:2015-certified facility, under ISO 20399:2022 standards with GMP compliance, defined quality criteria and documentation.

Alternative protein names

Interleukin-2, T-cell growth factor (TCGF), IL2, IL 2, Qk89, IL-2 GMP, IL2 GMP

Molecular weight

15.5 kDa (monomer)

Protein Uniprot number

Highly pure human IL-2 protein (UniProt number: P60568)

Species reactivity

- human
- species similarity:
- mouse - 56%
- rat - 57%
- bovine - 71%
- porcine - 69%

Product Information

- Certified animal origin-free (AOF)
- Cell and gene therapy grade
- Manufactured in our ISO 9001:2015 facility in Cambridge, UK
- Lot-to-lot consistency in bioactivity
- Full traceability and documentation
- Carrier protein-free, tag free
- Expressed in *E. coli*
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- CAR-T cell therapy manufacturing
- Cancer immunotherapy
- Immune cell therapy expansion

Further quality assays

- Mass spectrometry: single species with expected mass
- Purity >98%, by SDS-PAGE quantitative densitometry
- Recovery from stock vial: >95%
- Sterility tested and mycoplasma negative
- Endotoxin: <0.05 EU/µg protein
- Residual host cell protein <10 ng/µg
- Residual host cell DNA <10 ng/µg

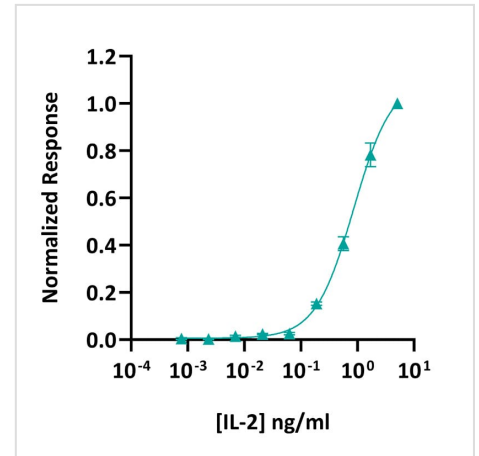
- N-terminal sequence analysis

Scientific Information

Bioactivity

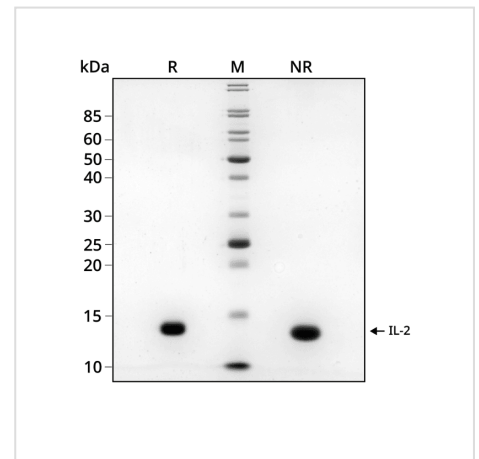
Recombinant IL-2 activity was determined using a SRE luciferase reporter assay in transiently transfected HEK293 cells co-transfected with the IL-2 receptors (IL-2R β and IL-2R γ). Transfected cells were treated in triplicate with a serial dilution of IL-2 for 3 hours. Firefly activity was measured and normalized to the control Renilla luciferase activity. Data from Qk089 lot #204686. EC50 = 0.86 ng/ml (55 pM).

The specific activity of cell therapy grade IL-2 is $>5.0 \times 10^6$ IU/mg, which is calibrated against the human IL-2 WHO standard (NIBSC code: 86/500).



Purity

Recombinant IL-2 migrates at approximately 15.5 kDa (monomer) in reduced (R) and non-reduced (NR) conditions. No contaminating protein bands are present. The purified recombinant protein (3 μ g) was resolved using 15% w/v SDS-PAGE in reduced (+ β -mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk089 lot #204686.



Original product page: <https://ryan.calliope-alpha.ts.net/product/recombinant-human-il-2-protein-qk089-ctg/>

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