



**Data Sheet: CellGro® / CellGenix™**  
**Recombinant Human Interleukin 4 (IL-4)**  
**ex vivo grade - Order No.: 1003**

Source	A DNA sequence encoding the mature IL-4 protein (Yakota, T. et al., 1986, PNAS 83:5894) was expressed in <i>E. coli</i> .
Raw Material Statement	n.a.
Production	Produced on the basis of Good Manufacturing Practice (GMP)
Molecular Mass	The methionyl form of the <i>E. coli</i> expressed mature human IL-4 contains 130 amino acid residues and has a molecular mass of approximately 14 kDa.
Identity	Confirmed by DNA-sequencing of the expression plasmid in EOP-cells and N-terminal sequencing of the final product.
Purity	≥ 97%, as determined by SDS-PAGE (under reducing and non-reducing conditions) and visualized by Silver staining.
Endotoxin Level	< 0.1 ng per 1 µg (< 1000 EU/mg), as determined by LAL gel clot test according to Eur.Pharm.; typically < 0.01 ng per 1 µg (< 100 EU/mg).
Residual Host-Cell DNA	≤ 200 ng per 1 mg, as determined by a fluorimetric assay.
Activity	Measured in a cell proliferation assay using a human factor-dependent cell line, TF-1 (Kitamura, T. et al., 1989, J. Cell Physiol. 140:323-334).  ED50 is typically 0.05 – 0.2 ng/ml ( $2 \times 10^7$ – $5 \times 10^6$ IU/mg) calibrated with the 1 <sup>st</sup> International Standard NIBSC, # 88/656
Sterility	Sterility test according to Eur.Pharm. of the vialled product (direct inoculation).
Formulation	Lyophilized from a 250 µg/ml, 0.2µm-sterile-filtered solution in PBS without any carrier materials and preservatives.
Amount per Vial	50 ± 5 µg, as determined by spectrophotometrical measurement at 280 nm using PBS as reference ( $A_{280} = 0.63$ for a concentration of 1 mg/ml IL-4 in PBS).
Transport	Ambient temperature
Storage at	-20°C to -80°C. Avoid repeated freeze-thaw cycles.
Shelf life	2 years from date of production Minimum 6 months from date of shipping
Intended Use	<b>For research or clinical ex vivo cell culture use only.</b> <b>Not intended for human in vivo application.</b>

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