



# Certificate of Analysis

## M-CSF Protein, Human

Cat. No.:	HY-P7050
Batch No.:	253146
Species:	Human
Source:	<i>E. coli</i>
Tag:	Tag Free
Accession:	P09603-3 (E33-S190)
Gene ID:	1435
Molecular Weight:	19-28 kDa

### ANALYTICAL DATA

TEST	Specifications	Results
Purity	Greater than 95% as determined by reducing SDS-PAGE.	≥95.0%
Endotoxin Level	<1 EU/μg, determined by LAL method.	PASS
Biological Activity	The ED <sub>50</sub> is 0.4 - 3 ng/mL as measured by M-NFS-60 cells, corresponding to a specific activity of $3.3 \times 10^5$ - $2.5 \times 10^6$ units/mg.	1 - 3 ng/mL
Appearance	Lyophilized powder	
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O or PBS or Tris-HCl, pH 8.0. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).	
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.	
Shipping	Room temperature in continental US; may vary elsewhere.	

**Caution: Product has not been fully validated for medical applications. For research use only.**

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