CERTIFICATE OF ORIGIN

Revision Date 17 Feb. 2026

ISOkine

PREMIUM GRADE GROWTH FACTORS AND CYTOKINES

Animal-Free | Endotoxin-Free | Carrier-Free

M-CSF, human, recombinant

DESCRIPTION

PRODUCT NAME	ISOkine® M-CSF
SOURCE	Barley (*Hordeum vulgare*)
CATALOG NO.	IK2400

MANUFACTURER INFORMATION

COMPANY NAME	ORF Genetics
ADDRESS	Víkurhvarf 7, 203 Kópavogur, Iceland
TYPE OF MANUFACTURER	Growth factor producer
COUNTRY OF ORIGIN	Iceland (IS 203)

DECLARATION

ORF Genetics ISOkine® human M-CSF is a plant based recombinant protein that contains 158 amino acids and 16 amino acid histidine-based tag for a total length of 174 amino acids and has a predicted molecular mass of 20.52 kDa. Human M-CSF is produced in the endosperm tissue of barley grain (*Hordeum vulgare*) and is animal-free and serum-free. The preparation does not contain any animal derived additives, such as albumin. The recombinant protein is for *in vitro* use only. ORF Genetics facilities handles no exotic viruses affecting livestock and avian species. Human M-CSF is a recombinant protein that contains no genes and expresses no products of exotic livestock or poultry disease agents.

ORF Genetics growth factors are manufactured under controlled conditions compliant with ISO 9001:2015 quality standards.

APPROVED BY

Hrönn Arnardóttir
Environmental & Quality Manager

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ORF GENETICS