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# Product Data Sheet

# Recombinant Human GM-CSF (ELISA Std.)

**Catalog # / Size:** 572409 / 4 pack

**Source:** Human GM-CSF, amino acids Ala18- Glu144 (Accession# AAA52578) was expressed in *E. coli*, approximately 14.6 kD.

**Preparation:** ELISA Standard 4-Pack contains four vials of recombinant human GM-CSF at >5 ng per vial. Recommended for ELISA application only. Standards are calibrated against a BioLegend Master Calibrator.

**Formulation:** Lyophilized in sterile-filtered PBS, pH 7.2, containing 1% BSA.

**Storage:** Upon receipt, store unopened vials between 2°C and 8°C immediately and use within 12 months from date of receipt. Prior to use, reconstitute the lyophilized powder with 0.2 ml of PBS containing a carrier protein (e.g., 1% BSA, protease free), pH7.4. Re-cap vial, vortex. Allow the reconstituted standard to sit at room temperature for 15 minutes, vortex again to mix completely. The reconstituted standard stock solution can be aliquoted into polypropylene vials and stored at -70°C for up to one month. Do not re-use diluted standards. Use a manual defrost freezer and avoid repeated freeze thaw cycles.

# Applications:

**Applications:** ELISA

**Recommended Usage:** Each lot of this protein is quality control tested by ELISA assay. For use as an ELISA standard, a standard curve comprised of doubling dilutions from 500 pg/ml to 4 pg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** This GM-CSF protein is useful as a standard for a human GM-CSF sandwich ELISA, using unlabelled anti-GM-CSF antibody, clone BVD2-23B6 (catalog #502202) for capture and biotinylated BVD2-21C11 (catalog #502304) antibody for detection.

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**Description:** GM-CSF plays a key role in signaling emergency hemopoiesis (predominantly myelopoiesis) in response to infection, including the production of granulocytes and macrophages in the bone marrow and their maintenance, survival, and functional activation at sites of injury or insult. The receptor for GM-CSF is a heterodimer that comprises a major binding subunit (GMRα) and a major signaling subunit (βc). The receptor subunits are always coexpressed on the surface of leukocytes, with βc being expressed at lower levels than GMRα. Certain nonhemopoietic cell types have also been reported to express the GM-CSF receptor and to respond to GM-CSF stimulation *in vitro*, although the *in vivo* significance of these observations remains uncertain.

**Antigen References:**

1. Hercus TR, *et al.* 2009 *Blood* 114:1289-1298.
2. Hayashida K, *et al.* 1990 *Proc Natl Acad Sci USA.* 87:9655-9659.
3. Walker F, *et al.* 1985 *EMBO J* 4:933-939.
4. Kitamura T, *et al.* 1989 *J. Cell Physiol.* 140:323.

**Related Products:**

| Product | Clone | Application |
|---|---|---|
| Purified anti-human GM-CSF | BVD2-23B6 | ELISA Capture, IP, WB |
| Biotin anti-human GM-CSF | BVD2-21C11 | ELISA Detection, ELISPOT Detection, ICFC |
| Human GM-CSF ELISA MAX™ Standard | | ELISA |
| Human GM-CSF ELISA MAX™ Deluxe | | ELISA |
| LEGEND MAX™ Human GM-CSF ELISA Kit with Pre-coated Plates | | ELISA |

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