DMEM (high-glucose, Glutamax)
For research use only

Catalogue number: BI-1003

Product Description

Dulbecco's Modified Eagle's Medium (DMEM) is one of the most widely used modifications of Eagle's medium that contains approximately four times as much of the vitamins and amino acids present in the original formula. Additionally, the formulation also includes glycine, serine, and ferric nitrate. DMEM is suitable for most types of cells, including human, monkey, hamster, rat, mouse, chicken, and fish cells. Cells successfully cultured in DMEM include primary fibroblasts, neurons, glial cells, HUVECs, and smooth muscle cells, as well as cell lines such as HeLa, 293, Cos-7, and PC-12. The additional glucose has proved to be useful in cultivating various other cell lines, including primary cultures of mouse and chicken cells as well as various normal and transformed cell lines. Specifically, this product (BI-1003) is Dulbecco's Modified Eagle Medium with glucose (high concentration: 4.5 g/L), HEPES (15 mM), Glutamax/L-Glutamine, pyruvate, sodium bicarbonate, and Phenol Red. HEPES (4-(2-hydroxyethyl) -1-piperazineethane-sulfonic acid), a zwitterionic organic chemical buffering agent is used for better maintaining the physiological pH changes in carbon dioxide concentrations.

Notes

- Respect storage conditions of the product.
- Do not use the product after the expiry date.
- Protect the product from light.
- Manipulate the product in aseptic conditions (e.g. under laminar air flow).
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. gloves, mask, and hygiene cap).
- Supplements, such as antibiotics, should be added aseptically to the medium. Storage conditions and shelf-life of the supplemented product would be affected by the nature of the Supplements.
- The medium should be clearand free of particulate and flocculent material. Do not use, if the medium is cloudy or contains a precipitate.
- In the case of using the medium in several steps, notice that after the first discharge, the air-to-medium ratio will increase inside. So, the medium will become alkaline earlier than expected. It's recommended to fill the remaining medium in 50ml sterile tubes, close tightly and use until the expiry date.
- Users are advised to review the literature for recommendations regarding medium supplementation and physiologi cal growth requirements specific to different cell lines.
- For research use only.

Quality Control

- **Appearance:** Red, clear solution
- **pH:** 7.40 -7.60
- **Sterility:** tested
- **Storage:** 2-8° C; Protect from light
- **Shelf life:** 6 months

References

1. Dulbecco, R. and Freeman, G. (1959). Plaque Production by the Polyoma Virus. Virology. 8, 396-397.
2. Morton, H.J., (1970). A Survey of Commercially Available Tissue Culture Media. In Vitro. 6, 89.

Citations

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2. Taghikani, Mohammad, and Fatemeh Eskandari. "Differentiation of Human MSCs Into Insulin Producing Cells by Using Lenti viral Vector Carrying PDX-1."
3. Rahmati, Shahram, et al. "Synthesis and in vitro evaluation of electrodeposited Barium titanate coating on Ti6Al4V." Journal of medical signals and sensors 6.2 (2016): 106.
4. Nikbakht Dastjerdi, Mehdi, et al. "The effect of adenosine A1 receptor agonist and antagonist on p53 and caspase 3, 8, and 9 ex pression and apoptosis rate in MCF-7 breast cancer cell line." Research in Pharmaceutical Sciences 4.11 (2016): 303-310.
5. Rajaei, Bahareh, et al. "Pancreatic Endoderm Derived from Diabetic Patient Specific Induced Pluripotent Stem Cell Generates Glucose Responsive Insulin Secreting Cells." Journal of Cellular Physiology (2016).