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DATASHEET

DMSO (Sterile-filtered)

Product overview

Name	DMSO (Sterile-filtered)
Cat No	HB3262
Alternative names	Methyl sulfoxide, Dimethyl Sulfoxide
Purity	>99.9%
Description	Widely used solvent. Improves direct differentiation of pluripotent stem cells and used as a stem cell cryoprotectant

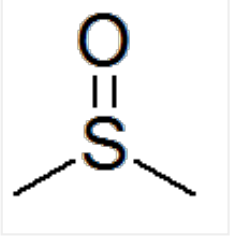
Biological Data

Biological description	Organic solvent widely used for dissolving lipophilic substances. Commonly used as a cryototectant in cryopreservation of stem cells. DMSO activates the retinoblastoma (Rb) protein and increases the proportion of cells in the early G1 phase of the cell cycle. DMSO improves directed differentiation of many cell lines. DMSO increases the competency of pluripotent stem cells (in >25 different embryonic and induced pluripotent stem cell lines) to respond to differentiation signals, enhance differentation across all germ layers and improve terminal differentiation into functional derivatives Endotoxin < 0.05 I.E(EU)/mL

Solubility & Handling

Storage instructions	Room temperature (desiccate)
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Handling	This compound is light sensitive. We therefore recommend protecting the compound and solutions from light.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	Dimethyl sulfoxide
Molecular Weight	78.13
Chemical structure	

Molecular Formula	C_2H_6OS
CAS Number	67-68-5
PubChem identifier	679
SMILES	CS(=O)C
InChi	InChI=1S/C2H6OS/c1-4(2)3/h1-2H3
InChiKey	IAZDPXIOMUYVGZ-UHFFFAOYSA-N
MDL number	MFCD00002089
Appearance	colourless liquid

References

Cryopreservation of hematopoietic stem cells.

Berz et al (2007) Am J Hematol 82(6):
PubMedID 17266054

A simple tool to improve pluripotent stem cell differentiation.

Chetty et al (2013) Nat Methods 10(6)
PubMedID 23584186

A cost-effective system for differentiation of intestinal epithelium from human induced pluripotent stem cells.

Ogaki et al (2015) Sci Rep 30
PubMedID 26616277