

Product Information

Iscove's Modified Dulbecco's Medium (IMDM)

Guilbert and Iscove demonstrated precursor cells of erythrocytes and macrophages could be cultured in a totally defined serum-free medium supplemented with albumin, transferrin, lecithin, and selenium. This medium is a modification of Dulbecco's Modified Eagle's Medium (DME) containing selenium, additional amino acids and vitamins, sodium pyruvate, HEPES buffer, and potassium nitrate instead of ferric nitrate. Further studies demonstrated Iscove's Medium would support murine B lymphocytes, hemopoietic tissue from bone marrow, B cells stimulated with lipopolysaccharide, T lymphocytes, and a variety of hybrid cells.

	I7633	I3390	I6529	I2911	51471C
	[Powder]	[1×	[1×	[1×	[1×
COMPONENT	g/L	g/L	g/L	g/L	g/L
Inorganic Salts					
CaCl ₂	0.1653	0.1653	0.1653	0.1653	0.165
MgSO ₄	0.9767	0.09767	0.09767	0.09767	0.09767
KCl	0.33	0.33	0.33	0.33	0.33
KNO ₃	0.000076	0.000076	0.000076	0.000076	0.000076
NaHCO ₃	—	3.024	3.024	3.024	3.024
NaCl	4.505	4.505	4.505	4.505	4.505
NaH ₂ PO ₄	0.109	0.109	0.109	0.109	—
NaH ₂ PO ₄ • H ₂ O	—	—	—	—	0.125
Na ₂ SeO ₃	0.000017	0.000017	0.000017	0.000017	0.000017
Amino Acids					
L-Alanine	0.025	0.025	0.025	0.025	0.025
L-Alanyl-L-Glutamine	—	—	—	0.869	—
L-Arginine • HCl	0.084	0.084	0.084	0.084	0.084
L-Asparagine • H ₂ O	0.0284	0.0284	0.0284	0.0284	0.0284
L-Aspartic Acid	0.03	0.03	0.03	0.03	0.03
L-Cystine • 2HCl	0.09124	0.09124	0.09124	0.09124	0.09124
L-Glutamic Acid	0.075	0.075	0.075	0.075	0.075
L-Glutamine	0.584	—	0.584	—	0.584
Glycine	0.03	0.03	0.03	0.03	0.03
L-Histidine • HCl • H ₂ O	0.042	0.042	0.042	0.042	0.042
L-Isoleucine	0.105	0.105	0.105	0.105	0.105
L-Leucine	0.105	0.105	0.105	0.105	0.105
L-Lysine • HCl	0.146	0.146	0.146	0.146	0.146
L-Methionine	0.03	0.03	0.03	0.03	0.03
L-Phenylalanine	0.066	0.066	0.066	0.066	0.066
L-Proline	0.04	0.04	0.04	0.04	0.04
L-Serine	0.042	0.042	0.042	0.042	0.042
L-Threonine	0.095	0.095	0.095	0.095	0.095
L-Tryptophan	0.016	0.016	0.016	0.016	0.016
L-Tyrosine • 2Na • 2H ₂ O	0.10379	0.10379	0.10379	0.10379	0.10379
L-Valine	0.094	0.094	0.094	0.094	0.094
Vitamins					
D-Biotin	0.000013	0.000013	0.000013	0.000013	0.000013
Choline Chloride	0.004	0.004	0.004	0.004	0.004
Folic Acid	0.004	0.004	0.004	0.004	0.004
myo-Inositol	0.0072	0.0072	0.0072	0.0072	0.0072
Niacinamide	0.004	0.004	0.004	0.004	0.004
D-Pantothenic Acid • ½Ca	0.004	0.004	0.004	0.004	0.004
Pyridoxal • HCl	0.004	0.004	0.004	0.004	0.004
Riboflavin	0.0004	0.0004	0.0004	0.0004	0.0004
Thiamine • HCl	0.004	0.004	0.004	0.004	0.004
Vitamin B ₁₂	0.000013	0.000013	0.000013	0.000013	0.000013

Other					
D-Glucose	4.5	4.5	4.5	4.5	4.5
HEPES	5.958	5.958	5.985	5.985	5.958
Phenol Red • Na	0.016	0.016	0.016	0.016	0.016
Pyruvic Acid • Na	0.11	0.11	0.11	0.11	0.11
ADD					
L-Glutamine	—	0.584	—	—	—
NaHCO ₃	3.024	—	—	—	—

References

1. Iscove, N.N., and Melchers, F., Complete Replacement of Serum by Albumin, Transferrin, and Soybean Lipid in Cultures of Lipopolysaccharide-Reactive B Lymphocytes. J. Exp. Medicine, **147**, 923-933 (1978).
2. Iscove, N.N. et al., Complete Replacement of Serum in Primary Cultures of Erythropoietin Dependent Red Cell Precursors [CFU-E] by Albumin, Transferrin, Iron, Unsaturated Fatty Acid, Lecithin and Cholesterol. Exp. Cell Research, **126**, 121-126 (1980).

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