

### Media stem cell, AdvanceSTEM™, Thermo Scientific HyClone®



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Utilising expertise gained during 40 years as a leading cell culture supplier, the Thermo Scientific HyClone® AdvanceSTEM™ line of stem cell culture products has been developed specifically for applications in stem cell research. The line comprises numerous products designed to support a wide range of applications such as the expansion and maintenance of undifferentiated murine embryonic and human adult mesenchymal stem cells to the directed differentiation of mesenchymal stem cells into adipocytes, chondrocytes and osteocytes.

The line includes AdvanceSTEM™ serum replacement, which has been developed to support the growth of undifferentiated embryonic stem cells in culture with minimal or no requirement for foetal bovine serum supplementation; and AdvanceSTEM™ Low Osmo DMEM, which features an optimised osmolality (osmo) approximating that of murine embryonic tissue.

The AdvanceSTEM™ line also includes its popular ES-screened foetal bovine serum (see sera), which is screened for the ability to promote the rapid growth of ES cells while retaining their pluripotent abilities. This eliminates the need for pre-screening serum.

#### AdvanceSTEM™ Low Osmo DMEM

This basal medium has an optimised osmolality, which approximates that of murine embryonic tissue. The formulation specifically supports the growth and maintenance of murine ES cells in an undifferentiated state.

#### AdvanceSTEM™ serum replacement

Supports the growth of undifferentiated embryonic stem cells in culture with minimal or no requirement for foetal bovine serum supplementation.

#### AdvanceSTEM™ Human Mesenchymal stem cell products

Human Mesenchymal stem cells are primary cells that can be successfully cultured in approximately eight passages. Thermo Scientific offers many options for the expansion of hMSCs, as well as directed adipogenic, osteogenic, and chondrogenic differentiation.

#### Mesenchymal stem cell expansion kit

Formulated to support the optimal expansion and maintenance of undifferentiated hMSCs, and includes 500mL of AdvanceSTEM Mesenchymal stem cell basal medium and 50mL of AdvanceSTEM™ growth supplement.

#### Adipogenic differentiation kit

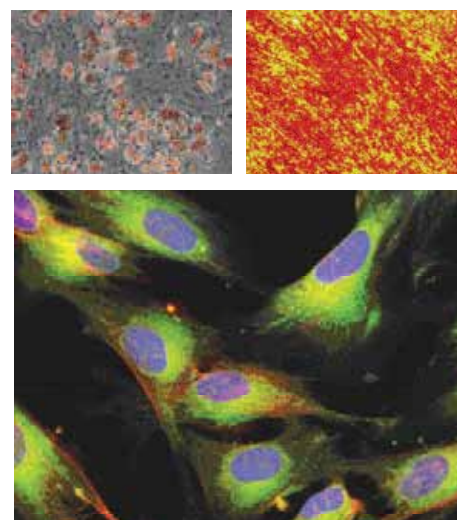
Post expansion using the AdvanceSTEM™ Mesenchymal expansion kit, differentiation of MSCs into adipocytes can be accomplished with this kit.

#### Osteogenic differentiation kit

After expanding MSCs the Osteogenic differentiation kit supports the differentiation of a variety of human MSCs, including Human Adipose-derived Mesenchymal Stem Cells (HAMSCs) and Human Multipotent Cord Blood Unrestricted Somatic Stem Cells (MCBUSCs).

#### Neural differentiation kit

The Neural differentiation kit facilitates optimal neural differentiation of HAMSCs and MCBUSCs.



Catalogue No	Alt. No	Description	Quantity
<b>HYC-018-010A</b>	SH30822.01	IMDM4SC, without L-Glutamine	500mL
<b>HYC-019-010R</b>	SH30824.01	DMEM4SC, with 4.5mg/L glucose, without L-Glutamine and sodium pyruvate	500mL
<b>HYC-020-010S</b>	SH30850.02	ES Qualified DPBS, modified without calcium, without magnesium	500mL
<b>HYC-020-020P</b>	SH30850.03	ES Qualified DBPS, modified without calcium, without magnesium	1L
<b>HYC-021-010M</b>	SH30851.01	ES Qualified HEPES solution (1M)	100mL
<b>HYC-022-010G</b>	SH30852.01	ES Qualified L-Glutamine 200 mM solution	100mL
<b>HYC-023-010A</b>	SH30853.01	ES Qualified non-essential amino acids solution (100X)	100mL
<b>HYC-024-010R</b>	SH30870.01	Low Osmo DMEM, without L-Glutamine	500mL
<b>HYC-024-020X</b>	SH30870.02	Low Osmo DMEM, without L-Glutamine	1L
<b>HZSH3087401</b>	SH30874.01	Serum replacement	50mL
<b>HYC-025-010L</b>	SH30874.02	Serum replacement	100mL
<b>HYC-025-020Y</b>	SH30874.03	Serum replacement	500mL
<b>HYC-026-010F</b>	SH30875.KT	Mesenchymal stem cell expansion kit contains: SH30878 (50mL) and SH30879 (500mL)	Kit
<b>HZSH30876KT</b>	SH30876.KT	Adipogenic differentiation kit, contains SH30886 (450mL) and SH30878 (50mL)	Kit
<b>HZSH30877KT</b>	SH30877.KT	Osteogenic differentiation kit, contains SH30881 (450mL) and SH30878 (50mL)	Kit
<b>HZSH30892KT</b>	SH30892.KT	Neural differentiation kit, contains SH30893 (450mL) and SH30878 (50mL)	Kit
<b>HYC-027-010W</b>	SH30878.01	Stem cell growth supplement	100mL
<b>HYC-028-010Q</b>	SH30879.01	Basal medium for undifferentiated human mesenchymal stem cells	500mL
<b>HYC-028-020N</b>	SH30879.02	Basal medium for undifferentiated human mesenchymal stem cells	1L
<b>HZSH3088602</b>	SH30886.02	Basal Adipogenic differentiation medium	450mL
<b>HZSH3088102</b>	SH30881.02	Basal Osteogenic differentiation medium	450mL
<b>HZSH3089302</b>	SH30893.02	Basal Neural differentiation medium	450mL