

StemTAG Alkaline Phosphatase (Red) Staining Kit

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CATALOG #
AAA44620

PRODUCT SYNONYMS

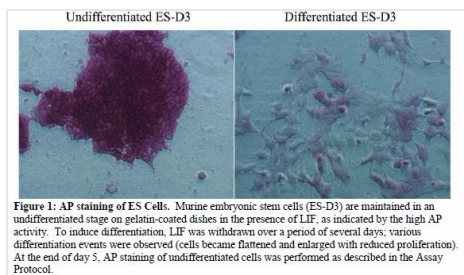
StemTAG Alkaline Phosphatase (Red); StemTAG Alkaline Phosphatase Staining Kit (Red); StemTAG Alkaline Phosphatase (Red) staining kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store all components at 4 degree C until their expiration dates.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for StemTAG Alkaline Phosphatase (Red) staining kit

Background: Embryonic stem (ES) cells are continuous proliferating stem cell lines of embryonic origin first isolated from the inner cell mass (ICM). Two distinguishing features of ES cells are their ability to be maintained indefinitely in an undifferentiated state and their potential to develop into any cell within the body. Based on previous methods developed for mouse ES cells, human ES cell lines were first established by Dr. James Thomson and colleagues. Like mouse ES cells, human ES cells express high levels of membrane alkaline phosphatase (AP) and Oct-4, a transcriptional factor critical to ICM and germline formation. However, unlike mouse ES cells, hES cells do not express stage-specific embryonic antigen (SSEA-1). In addition, prolonged propagation of hES cells is typically achieved by coculture with primary mouse embryonic fibroblasts (MEFs) serving as feeder cells. Human ES cell lines are not able to maintain their undifferentiated state in the absence of supporting feeder layer cells, even when exogenous cytokines such as leukemia inhibitory factor (LIF) and gelatin-coated plates are used. Although stem cells from different origins require different growth conditions for self-renewal and display different cell surface markers (see Table 1), AP is the most widely used stem cell marker. The StemTAG Alkaline Phosphatase Staining Kit provides an efficient system for monitoring ES cell undifferentiation/ differentiation through AP activity by immunocytochemistry staining.

Product Categories/Family for StemTAG Alkaline Phosphatase (Red) staining kit

Stem Cell Research; Alkaline Phosphatase Detection

References

1. Wobus AM, Holzhausen H, Jäkel P et al. (1984). Exp Cell Res 152:212-219.
2. Thomson JA, Itskovitz-Eldor J, Shapiro SS et al. (1998). Science 282:1145-1147.
3. Smith AG, Nichols J, Robertson M et al. (1992). Dev Biol 151:339-351.
4. Reubinoff BE, Pera MF, Fong CY et al. (2000). Nat Biotechnol 18:399-404
1. Lee, J. et al. (2010). Ultraviolet A Regulates Adipogenic Differentiation of Human Adipose Tissue-derived Mesenchymal Stem Cells via Up-Regulation of Kruppel-like Factor 2. J. Biol. Chem. 285:32647-32656.
2. Izadyar, F. et al. (2008). Generation of multipotent cell lines from a distinct population of male germ line stem cells. Reproduction 135:771-784.
3. Dharmacon Application Note: DharmaFect Transfection Reagents for siRNA Transfection into Embryonic Stem Cells (2006). Publication # 00078-06-E-01-U.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/staining-kits/stemtag-alkaline-phosphatase-red/44620>