



Product Specification Sheet

Product Name	Stemgent® Oct4 Antibody (Affinity Purified), Rabbit anti-Mouse/Human
Description	Oct4 (Octamer-4) is a homeodomain transcription factor of the POU family (POU5F1) and is involved in the regulation of pluripotency during normal development. The expression of Oct4 is associated with an undifferentiated phenotype in embryonic stem (ES) cells, while gene knockdown of Oct4 promotes differentiation. As such, it is frequently used as a marker for undifferentiated ES cells or induced pluripotent stem (iPS) cells. Oct4 is one of the key transcription factors used to reprogram mouse and human fibroblasts to a pluripotent state. The Oct4 Antibody (Affinity Purified) was screened on human and mouse ES cells using immunocytochemistry and flow cytometry and selected as the best Oct4 antibody available for researchers needing to demonstrate pluripotency.
Catalog Number	09-0023
Size	100 µl
Clone	Polyclonal
Isotype	Rabbit IgG
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 300 to the C-terminus of human Oct4
Reactivity	Mouse, Human
Preparation	This antibody was purified by immunogen affinity chromatography.
Formulation	Phosphate-buffered solution, pH 7.4, 1% BSA and 0.02% sodium azide
Storage and Stability	Store at 4°C protected from light. Do not freeze. Stable for 6 months from date of receipt when stored as directed.
Quality Control	Tested by immunocytochemistry (Figure 1) and flow cytometry (Figure 2) to ensure product quality.
Recommended Usage	The suggested use of this antibody is a 1:100 dilution for immunocytochemistry and a 1:5 dilution for flow cytometry. For application specific protocols, please reference <i>Protocol: Immunocytochemistry</i> and <i>Protocol: Flow Cytometry</i> online at www.stemgent.com/support/protocols .

For research use only. Not for use in diagnostic procedures.

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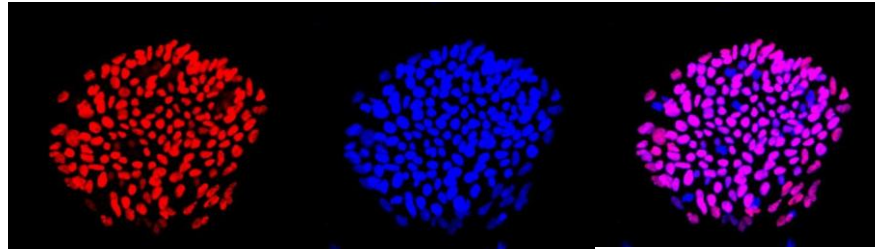


Figure 1. Immunocytochemistry analysis of Oct4 on H1 human ES cells. Cells were treated with Oct4 Antibody (Affinity Purified) using a 1:100 dilution followed by a secondary Cy[™]3 conjugated antibody (red). DAPI staining was performed to visualize nuclei (blue).

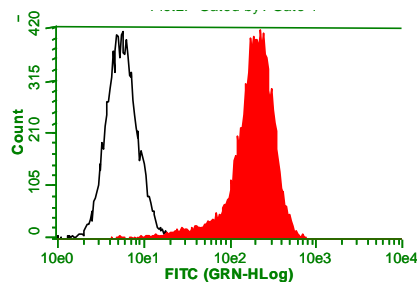


Figure 2. Flow cytometry analysis of Oct4 on H1 human ES cells. Red histogram represents Oct4 Antibody and open histogram represents isotype control at the same concentration.

References

1. Looijenga, L.H., Stoop, H., de Leeuw, H.P., de Gouveia Brazao, C.A., Gillis, A.J., van Roozendaal, K.E., van Zoelen, E.J., Weber, R.F., Wolffenbuttel, K.P., van Dekken, H., Honecker, F., Bokemeyer, C., Perlman, E.J., Schneider, D.T., Kononen, J., Sauter, G., and Oosterhuis, J.W. (2003) POU5F1 (OCT3/4) identifies cells with pluripotent potential in human germ cell tumors. *Cancer Research* 63: 2244-2250.
2. Zaehres, H., Lensch, M.W., Daheron, L., Stewart, S.A., Itskovitz-Eldor, J., and Daley, G.Q. (2005) High-efficiency RNA interference in human embryonic stem cells. *Stem Cells* 23: 299-305.
3. Takahashi, K., and Yamanaka, S. (2006) Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. *Cell* 126: 663-676.
4. Takahashi, K., Tanabe, K., Ohnuki, M., Narita, M., Ichisaka, T., Tomoda, K., and Yamanaka, S. (2007) Induction of pluripotent stem cells from adult human fibroblasts by defined factors. *Cell* 131: 861-872.
5. Park, I.H., Arora, N., Huo, H., Maherali, N., Ahfeldt, T., Shimamura, A., Lensch, M.W., Cowan, C., Hochedlinger, K., and Daley, G.Q. (2008) Disease-specific induced pluripotent stem cells. *Cell* 134: 877-886.

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