Anti-Human/Mouse Sox2 Purified

Catalog Number: 14-9811
Also known as: Sox-2
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Human/Mouse Sox2 Purified
REF **Catalog Number:** 14-9811
Clone: Btjce
Concentration: 0.5 mg/mL
Host/Isotype: Rat IgG2a, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial
Contains sodium azide

Description

The Btjce monoclonal antibody reacts with the transcription factor Sox2, a member of the SOX (sex determining region Y -related HMG (High Mobility Group) Box) family of proteins. Sox family members play a role in early organ development, and in particular, Sox2 is essential for regulating genes that control normal mammalian embryogenesis. Sox2 and family member Sox3 are expressed as early as the preimplantation and epiblast stages respectively. Later expression is restricted to the neuroepithelium. Sox2 has been shown to be necessary for maintaining self-renewal and pluripotency of mouse and human embryonic stem (ES) cells (ESC). Oct4 (POU5F1), Klf4, c-myc, and Sox2 were the original four factors used to reprogram differentiated mouse and human cells to induced pluripotent stem cells (iPSC).

Expression of Sox2 is tightly regulated and recent studies have demonstrated that small changes in the levels of Sox2 in ES cells can trigger differentiation into multiple cell types. Sox2 expression is not limited to ES cells, it is also essential for early neurogenesis where its expression becomes restricted to the neural plate, and later to neural stem cells where it functions to suppress neural differentiation. Sox2 in combination with other stem cell markers can be used to characterize stem cell populations. Ectopic expression of Sox2 has been associated with multiple cancer types including colorectal and breast.

Applications Reported

This Btjce antibody has been reported for use in intracellular staining followed by flow cytometric analysis, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, immunocytochemistry, western blot and ELISA (Fluorochrome-conjugated Btjce is recommended for use in intracellular flow cytometry).

Applications Tested

This Btjce antibody has been tested by immunohistochemistry on FFPE human testes at less than or equal to 5 ug/mL. The antibody can be used with either high or low pH antigen retrieval. This Btjce antibody has been tested by immunocytochemistry on fixed and permeabilized iPS cells at less than or equal to 5 ug/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Park I-H, Arora N, Huo H, Maherali N, Ahfeldt T, Shimamura A, Lensch MW, Cowan C, Hochedlinger K, Daley GQ. Disease-specific induced pluripotent stem cells. Cell. 2008 Sep 5;134(5):877-86.

Takahashi K, Tanabe K, Ohnuki M, Narita M, Ichisaka T, Tomoda K, Yamanaka S. Induction of Pluripotent Stem Cells from Adult Human Fibroblasts by Defined Factors. Cell. 2007 131:861–8723.

Takahashi K and Yamanaka S. Induction of Pluripotent Stem Cells from Mouse Embryonic and Adult Fibroblast Cultures by Defined Factors. 2006. Cell 126:663–676.

Related Products

00-4953 IHC /ICC Blocking Buffer - Low Protein
00-4954 20X TBS Wash Buffer for IHC/ICC
00-4955 IHC Antigen Retrieval Solution – Low pH (10X)

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00-4956 IHC Antigen Retrieval Solution – High pH (10X)
00-4958 Fluoromount-G™
14-4321 Rat IgG2a K Isotype Control Purified (eBR2a)

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