SOX2 Monoclonal Antibody (Btjce), eFluor 660, eBioscience™

Product Details	
Size	100 µg
Species	Human, Mouse
Published Species	Mouse
Expression System	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), eFluor 660, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	Btjce
Conjugate	eFluor® 660
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_11220483

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.125 µg/test	2 Publications
Immunocytochemistry (ICC)	Assay-Dependent	1 Publication
Immunofluorescence (IF)	Assay-Dependent	4 Publications
Immunohistochemistry (IHC)	-	1 Publication

Product Specific Information

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 and immunocytochemistry.

Applications Tested: This btjce antibody has been tested by immunocyochemstry of fixed and permeabilized F9 cells. This can be used at less than or equal to 10 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

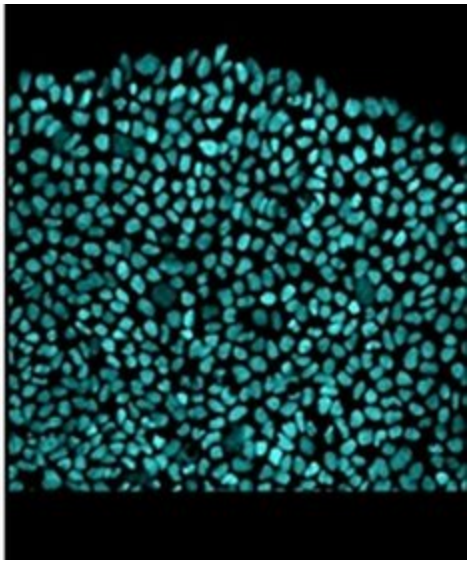
This btjce has also been tested by intracellular staining and flow cytometric analysis using the Foxp3/Transcription Factor Buffer and protocol. Please refer to intracellular Staining Protocol on Best Protocol web page - Protocol B: One-step protocol for intracellular (nuclear) proteins. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

eFluor® 660 is a replacement for Alexa Fluor® 647. eFluor® 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochome.

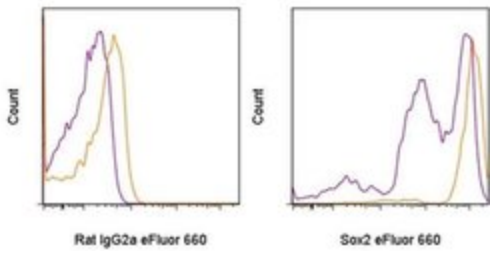
Excitation: 633-647 nm; Emission: 668 nm; Laser: Red Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For SOX2 Monoclonal Antibody (Btjce), eFluor 660, eBioscience™



SOX2 Antibody (50-9811-82) in ICC
Immunocytochemistry on fixed and permeabilized induced pluripotent stem cells using 10 µg/mL Anti-Human/Mouse Sox2 eFluor® 660 (right, image courtesy of Dr. A. Firth, Salk Institute).



SOX2 Antibody (50-9811-82) in Flow
Intracellular staining of untreated (pink) and retinoic acid treated (yellow) F9 cell line with 0.125 µg of Rat IgG2a kappa Isotype Control eFluor® 660 (left) or 0.125 µg of Anti-Human/Mouse Sox2 eFluor® 660 (right) using Foxp3 Staining Buffers. Total cells were used for analysis.

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8 References

Immunofluorescence (4)

Nature communications

BCL11A interacts with SOX2 to control the expression of epigenetic regulators in lung squamous carcinoma.

"Published figure using SOX2 monoclonal antibody (Product # 50-9811-82) in Immunofluorescence"

Authors: Lazarus KA,Hadi F,Zambon E,Bach K,Santolla MF,Watson JK,Correia LL,Das M,Ugur R,Pensa S,Becker L, Campos LS,Ladds G,Liu P,Evan GI,McCaughan FM,Le Quesne J,Lee JH,Calado D,Khaled WT

Species
Not Applicable

Dilution
Not Cited

Year
2018

eLife

Micropattern differentiation of mouse pluripotent stem cells recapitulates embryo regionalized cell fate patterning.

"Published figure using SOX2 monoclonal antibody (Product # 50-9811-82) in Immunofluorescence"

Authors: Morgani SM,Metzger JJ,Nichols J,Siggia ED,Hadjantonakis AK

Species
Not Applicable

Dilution
Not Cited

Year
2018

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Immunocytochemistry (1)

eLife

Micropattern differentiation of mouse pluripotent stem cells recapitulates embryo regionalized cell fate patterning.

"Published figure using SOX2 monoclonal antibody (Product # 50-9811-82) in Immunofluorescence"

Authors: Morgani SM,Metzger JJ,Nichols J,Siggia ED,Hadjantonakis AK

Species
Not Applicable

Dilution
Not Cited

Year
2018

Flow Cytometry (2)

eLife

Dynamics of embryonic stem cell differentiation inferred from single-cell transcriptomics show a series of transitions through discrete cell states.

"Published figure using SOX2 monoclonal antibody (Product # 50-9811-82) in Flow Cytometry"

Authors: Jang S,Choubey S,Furchtgott L,Zou LN,Doyle A,Menon V,Loew EB,Krostag AR,Martinez RA,Madisen L,Levi BP,Ramanathan S

Species
Not Applicable

Dilution
Not Cited

Year
2017

More applications with references on thermofisher.com

IHC (1)