

Sox2-TAT, human recombinant protein**Sox-2****Catalog # PBV10833r****Specification****Sox2-TAT, human recombinant protein - Product info**

Primary Accession

[P48431](#)

Calculated MW

36 kDa KDa**Sox2-TAT, human recombinant protein - Additional Info**

Gene ID

6657

Gene Symbol

Sox2**Other Names**

Sox-2

Gene Source

Human

Source

E. Coli

Assay&Purity

SDS-PAGE; ≥95%

Assay2&Purity2

HPLC;

Recombinant

Yes

Sequence

**MYNMMETELK PPGPQQTSGG GGGNSTAAAA
GGNQKNSPDR VKRPMNAFMV
WSRGQRRKMA QENPKMHNSE ISKRLGAEWK
LLSETEKRPF IDEAKRLRAL HMKEHPDYKY
RPRRKTCTLM KDKYTLPGG LLAPGGNSMA
SGVGVGAGLG AGVNQRMDSY
AHMNGWSNGS YSMMQDQLGY
PQHPLNAHG AAQMOPMHRY
DVSALQYNSM TSSQTYMNGS PTYSMSYSQQ
GTPGMALGSM GSVVKSEASS SPPVVTSSSH
SRAPCQAGDL RDMISMYLPG AEVPEPAAPS
RLHMSQHYQS GPVPGTAING TLPLSHMGGY
GRKKRRQRRR****Target/Specificity**

Sox2

Application Notes

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Format

Lyophilized powder

Storage

-20°C; Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 8.0

Sox2-TAT, human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Sox2-TAT, human recombinant protein - Images

Sox2-TAT, human recombinant protein - Background

Sox2, also known as sex determining region Y (SRY)-box 2, belongs to a diverse family of structurally-related transcription factors whose primary structure contains a 79-residue DNA-binding domain, called high mobility group (HMG) box. It plays an essential role in maintaining the pluripotency of embryonic stem cells (ESC) and determination of cell fate. Microarray analysis showed that Sox2 regulates the expression of multiple genes involved in embryonic development including FGF-4, YES1 and ZFP206. Sox2 acts as a transcriptional activator after forming a ternary complex with Oct3/4 and a conserved non-coding DNA sequence (CNS1) located approximately 2 kb upstream of the RAX promoter. The introduction of Sox2, Oct4, Myc, and Klf4, into human dermal fibroblasts isolated from a skin biopsy of a healthy research fellow was sufficient to confer a pluripotent state upon the fibroblast genome. The reprogrammed cells thus obtained resemble ESC in morphology, gene expression, and in the capacity to form teratomas in immune-deficient mice. Sox2 and other transcription factors have been introduced into cells by DNA transfection, viral infection, or microinjection. Protein transduction using TAT fusion proteins represents an alternative methodology for introducing transcription factors and other nuclear proteins into primary as well as transformed cells. Recombinant human Sox2-TAT expressed in E. coli is a 36 kDa protein containing 330 amino-acid residues, including the 317 residues of full-length Sox2 and a 13-residue C-terminal TAT peptide (GGYGRKKRRQRRR).

Sox2-TAT, human recombinant protein - References

Stevanovic M., et al. Mamm. Genome 5:640-642(1994).
Sadler L.A., et al. Submitted (DEC-1992) to the EMBL/GenBank/DDBJ databases.
Fantes J., et al. Nat. Genet. 33:461-463(2003).
Takahashi K., et al. Cell 131:861-872(2007).
Rigbolt K.T., et al. Sci. Signal. 4:RS3-RS3(2011).