Sox2-TAT, human recombinant

CATALOG #:	7203-10	10 µg
	7203-50	50 µg
ALTERNATE NAMES:	Sox-2	
SOURCE:	E coli	
PURITY:	≥ 95% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	36 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 8.0	
STORAGE CONDITIONS:	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

RECONSTITUTION:

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.

DESCRIPTION:

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).

AMINO ACID SEQUENCE:

MYNMMETELK PPGPQQTSGG GGGNSTAAAA GGNQKNSPDR VKRPMNAFMV WSRGQRRKMA QENPKMHNSE ISKRLGAEWK LLSETEKRPF IDEAKRLRAL HMKEHPDYKY RPRRKTKTLM KKDKYTLPGG LLAPGGNSMA SGVGVGAGLG AGVNQRMDSY AHMNGWSNGS YSMMQDQLGY PQHPGLNAHG AAQMQPMHRY DVSALQYNSM TSSQTYMNGS PTYSMSYSQQ GTPGMALGSM GSVVKSEASS SPPVVTSSSH SRAPCQAGDL RDMISMYLPG AEVPEPAAPS RLHMSQHYQS GPVPGTAING TLPLSHMGGY GRKKRRQRRR

RELATED PRODUCTS:

- Sox2, human recombinant **(Cat. No. 7202-10, -50)**
- Sox-1 Antibody **(Cat. No. 3822-100)**
- Sox-2 Antibody **(Cat. No. 3889-100)**
- Sox-1 Blocking peptide **(Cat. No. 3822BP-50)**
- Sox-2 Blocking peptide **(Cat. No. 3889BP-50)**
- Sox-4 Antibody **(Cat. No. 3168-100)**

FOR RESEARCH USE ONLY! Not to be used in humans.