**BACKGROUND**

POU5F1 (POU domain, class 5, transcription factor 1), also known as octamer-binding transcription factor-3 (Oct-3, Oct-3F), octamer-binding transcription factor-4 (Oct-4, Oct-4F) and Oct-3/4, modulates embryonic stem (ES) cell populations by influencing lineage commitment. Oct-3/4 sustains stem-cell self-renewal and differentiation pathways. Transcription factors containing the POU homeodomain regulate tissue-specific gene expression in lymphoid and pituitary differentiation and in early mammalian development. Oct-3/4 is capable of inducing rapid proliferation and tumorigenic properties of ES cells through activation of the UTF1 gene. In humans, two Oct-3/4 isoforms contribute to influencing the undifferentiated phenotype of ES cells. Oct-3/4 pseudogenes localizing to human chromosomes 10 and 8 are reported to be transcribed in certain cancer cell lines and tissues.

**CHROMOSOMAL LOCATION**

Genetic locus: POU5F1 (human) mapping to 6p21.33; Pou5f1 (mouse) mapping to 17B1.

**SOURCE**

Oct-3/4 (H-134) is a rabbit polyclonal antibody raised against amino acids 1-134 mapping at the N-terminus of Oct-3/4 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9081X, 200 µg/0.1 ml.

**APPLICATIONS**

Oct-3/4 (H-134) is recommended for detection of Oct-3/4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:1000-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Oct-3/4 isoform B.

Oct-3/4 (H-134) is also recommended for detection of Oct-3/4 in additional species, including equine and porcine.


Oct-3/4 (H-134) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.


Positive Controls: F9 cell lysate: sc-2245 or mouse kidney extract: sc-2255.

**STORAGE**

Store at 4°C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

![Western blot analysis of Oct-3/4 expression in F9 whole cell lysate.](image1)

![Immunofluorescence staining of formalin-fixed human embryonic stem cells showing nuclear staining of Oct-3/4 (pink), cytoplasmic staining of L-Alkaline phosphatase (green) and blue counterstain](image2)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.