

Datasheet for 600-401-A95**Oct-4 Antibody****Overview**

Description:	Anti-Oct-4 (RABBIT) Antibody - 600-401-A95
Item No.:	600-401-A95
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	Oct-4, also known as POU domain transcription factor, Octamer-binding transcription factor 3 and Oct-3, is expressed in human and mouse totipotent embryonic stem and germ cells. It may function in preventing these cells from differentiating. Each type of established mammalian pluripotent stem cell line (embryonal carcinoma (EC) cells, embryonic stem (ES) cells and embryonic germ (EG) cells) expresses Oct-4, which disappears rapidly when the cells differentiate. Most studies on Oct-4 have been performed on murine embryos. In human oocytes of various maturity and normally developing preimplantation/cleavage embryos, a variable Oct-4 expression pattern has been revealed, concomitant with a pure cytoplasmic localization of the protein. This variability in expression fades away during compaction, indicating embryonic Oct-4 expression; the protein appears in the nucleus, implying biological activity. Functional Oct-4 has been found in human amniotic fluid. As Oct-4 transcripts have also been found in various differentiated cells, the presence of Oct-4 transcripts or proteins may not be sufficient for identifying undifferentiated cell lines in humans. It may also be important to examine the localization of Oct-4 proteins within a cell. Oct-4 has been shown to interact with Nanog and with proteins from multiple repression complexes, including the NuRD, Sin3A and Pml complexes, possibly to control ES fate. Reactivation of Oct-4 expression is postulated to occur in differentiated cells that have undergone carcinogenesis, or tumor formation.
Synonyms:	rabbit anti-OCT4 antibody, OCT-4, OCT 4, Octamer binding protein 4 antibody, Octamer binding transcription factor 3 antibody, OTF3 antibody, OCT3, POU5F1, POU class 5 homeobox 1 antibody, POU domain class 5 transcription factor 1 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	POU5F1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human Oct-4 protein.
Purity/Specificity:	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human and mouse Oct-4 protein. Cross-reactivity with Oct-4 from other species has not been tested. A BLAST analysis was used to suggest additional cross-reactivity with Oct-4 from chimpanzee, macaque and horse based on a 100% homology with the immunizing sequence; and mink, dog, bovine and pig based on a 93% homology.
Relevant Links:	• UniProtKB - Q01860 • NCBI - 116235491 • GeneID - 5460

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:350,000
IF:	User Optimized
IP:	User Optimized
WB:	1:1,000 - 1:1,500

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: 0.01% (w/v) Sodium Azide

Stabilizer: None

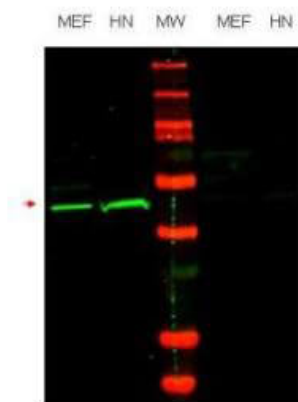
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration: Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western blot using Rockland's affinity purified anti-Oct4 antibody shows detection of endogenous Oct4. Lane 1: mouse embryonic fibroblast (MEF) cell lysate (p/n W10-001-371). Lane 2: human HeLa nuclear extract (HN) (p/n W09-001-367). The band at ~39 kDa (arrow head) corresponds to Oct4. After transfer, the membrane was blocked with 5% BSA (p/n BSA-30). Primary antibody was used at a 1:1,000 dilution in PBS containing 5% BSA. The specificity of the antibody was confirmed by peptide competition which blocks reaction of the antibody with Oct4 (lanes 3 and 4, respectively).

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.