Anti-Oct4 Antibody [A3-C11-R]

HA601207

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 39 kDa
Clone number:	A3-C11-R

Description: Oct-4 (POU5F1) is transcription factor that binds to the octamer motif (5'-ATTTGCAT-3'). It forms a trimeric complex with SOX2 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Oct-4 is critical for early embryogenesis and for embryonic stem cell pluripotency. It is expressed in developing brain and highest levels also found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum.

Immunogen: Recombinant protein within full length human Oct4 protein.

Positive control: NCCIT cell lysates, NCCIT.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: Q01860 Human

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

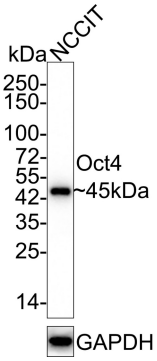

Fig1: Western blot analysis of Oct4 on NCCIT cell lysates with Mouse anti-Oct4 antibody (HA601207) at 1/1,000 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 39 kDa
Observed band size: 45 kDa

Exposure time: 1 minute 59 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601207) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

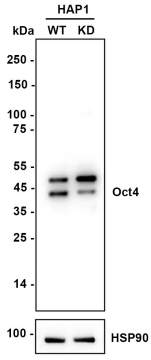

Fig2: Western blot analysis of Oct4 on different lysates with Mouse anti-Oct4 antibody (HA601207) at 1/1,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-Oct4 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 39 kDa
Observed band size: 42 kDa

Exposure time: 18 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601207) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

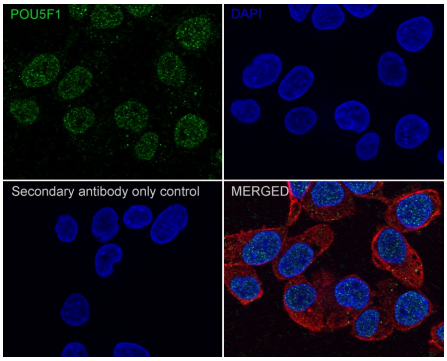

Fig3: Immunocytochemistry analysis of NCCIT cells labeling Oct4 with Mouse anti-Oct4 antibody (HA601207) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-Oct4 antibody (HA601207) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

Background References

1. Oct4 pseudogenes are transcribed in cancers."Suo G., Han J., Wang X., Zhang J., Zhao Y., Zhao Y., Dai J.Biochem. Biophys. Res. Commun. 337:1047-1051(2005)
2. Sumoylation of Oct4 enhances its stability, DNA binding, and transactivation."Wei F., Schoeler H.R., Atchison M.L.J. Biol. Chem. 282:21551-21560(2007)
3. Post-translational modification of POU domain transcription factor Oct-4 by SUMO-1."Zhang Z., Liao B., Xu M., Jin Y.FASEB J. 21:3042-3051(2007)