Anti-Stra8 Antibody [PSH04-55]

HA722154

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, FC
Molecular Wt:	Predicted band size: 37 kDa
Clone number:	PSH04-55

Description: The signaled by retinoic acid 8 (Stra8) gene is activated only upon stimulation by retinoic acid and expresses a cytoplasmic protein in the gonads of male and female vertebrates. This protein functions to initiate the transition between mitosis and meiosis, aiding in spermatogenesis and oogenesis. In females, its signaling begins 12.5 days after conception, is localized in the primordial germ cells of female ovaries, and ushers in the first stage of meiosis. Male expression begins postnatally and continues throughout life, matching the need of spermatogenesis compared to the limited window of oogenesis in females. Sperm of mice that had induced null mutations for Stra8 gene were able to undergo mitotic divisions, and while some sperm were able to transition into the early stages of meiosis I, but could not transition into further sub-stages of meiosis I. Errors in chromosome pairing and chromosome condensation were observed following these failures. In female mice, loss of Stra8 signaling shows failure to enter into meiosis. Both males and females are left infertile if Stra8 signaling is absent.

Immunogen: Recombinant protein within human Stra8 aa 1-330 / 330.

Positive control: SK-OV-3 cell lysate, LNCaP cell lysate, SK-OV-3.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt Q7Z7C7 Human

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:250
FC	1:1,000

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

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

Purity: Protein A affinity purified.

Images

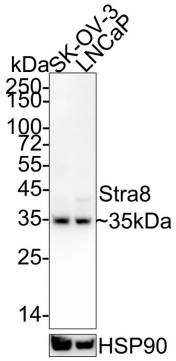

Fig1: Western blot analysis of Stra8 on different lysates with Rabbit anti-Stra8 antibody (HA722154) at 1/1,000 dilution.

Lane 1: SK-OV-3 cell lysate
Lane 2: LNCaP cell lysate

Lysates/proteins at 30 µg/Lane.

Predicted band size: 37 kDa
Observed band size: 35 kDa

Exposure time: 3 minutes; ECL: K1802;

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 (HA722154) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

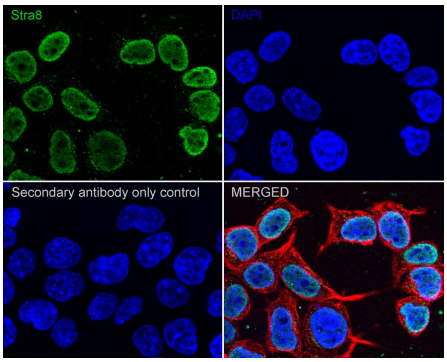

Fig2: Immunocytochemistry analysis of SK-OV-3 cells labeling Stra8 with Rabbit anti-Stra8 antibody (HA722154) at 1/250 dilution.

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 Rabbit anti-Stra8 antibody (HA722154) at 1/250 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) 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 (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

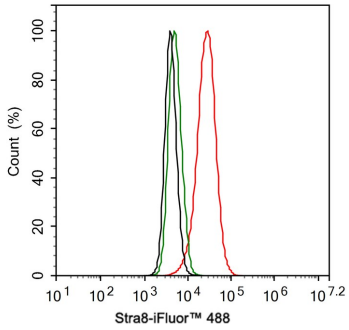

Fig3: Flow cytometric analysis of SK-OV-3 cells labeling Stra8.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722154, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Shimada R et al. STRA8-RB interaction is required for timely entry of meiosis in mouse female germ cells. Nat Commun. 2023 Oct
2. Sun S et al. Znhit1 controls meiotic initiation in male germ cells by coordinating with Stra8 to activate meiotic gene expression. Dev Cell. 2022 Apr