Anti-Aurora B Antibody [SC55-08]

ET1610-25

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IP, IF-Cell
Molecular Wt:	Predicted band size: 39 kDa
Clone number:	SC55-08

Description: Aurora related kinase-1 (ARK-1, STK15, Aurora2, Aik1) and -2 (ARK-2, STK12, Aurora1) are centrosome-associated serine/ threonine kinases that regulate centrosome separation, bipolar spindle assembly, and chromosome segregation during mitosis. ARK-1 and -2 are expressed in the nucleus and localize to distinct portions of mitotic machinery such as the centrosome, spindle poles (ARK-1), and midbody (ARK-2) during mitosis. ARK-1 and -2 transcripts are present at high levels in human thymus and fetal liver. ARK-1 protein has elevated expression in colon carcinoma lines (HT-29, SNU-C2B, COLO 205, SW480, 837 and 948) and accumulates during metaphase in HeLa cells. ARK-2 protein levels are maximal during both S and G2/M phases, whereas ARK-1 protein is degraded after G2/M via the ubiquitin-proteasome pathway. ARK-2 has a unique genetic loci relative to ARK-1, suggesting that these two kinases, with oncogenic potential, have different roles in cell cycle progression.

Immunogen: Synthetic peptide within Human Aurora B aa 1-50 / 344.

Positive control: Hela cell lysate, MCF-7 cell lysate, human tonsil tissue, HeLa.

Subcellular location: Nucleus, Cytoplasm, Chromosome.

Database links: SwissProt: Q96GD4 Human | O70126 Mouse | O55099 Rat

Recommended Dilutions:

WB	1:1,000-1:2,000
IHC-P	1:50-1:200
IF-Cell	1:100

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

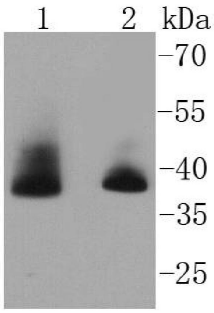

Fig1: Western blot analysis of Aurora B on different lysates using anti-Aurora B antibody at 1/1,000 dilution.
Positive control:
Lane 1: Hela cell lysates
Lane 2: MCF-7 cell lysates

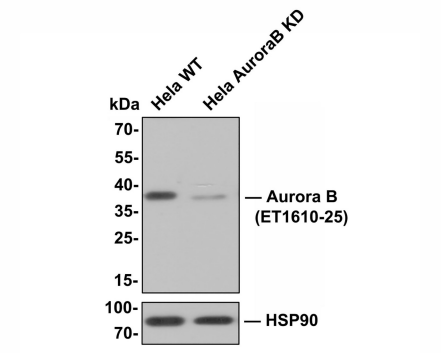

Fig2: All lanes: Western blot analysis of Aurora B with anti-Aurora B antibody (ET1610-25) at 1:500 dilution.
Lane 1: Wild-type Hela whole cell lysate (10 µg).
Lane 2: Aurora B knockdown Hela whole cell lysate (10 µg).

ET1610-25 was shown to specifically react with Aurora B in wild-type Hela cells. Weakened band was observed when Aurora B knockdown sample was tested. Wild-type and Aurora B knockdown samples were subjected to SDS-PAGE. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (ET1610-25, 1:500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG-HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

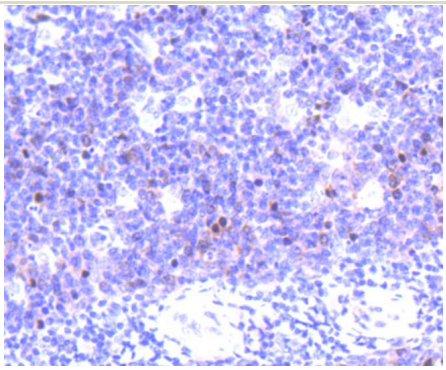

Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-Aurora B antibody. Counter stained with hematoxylin.

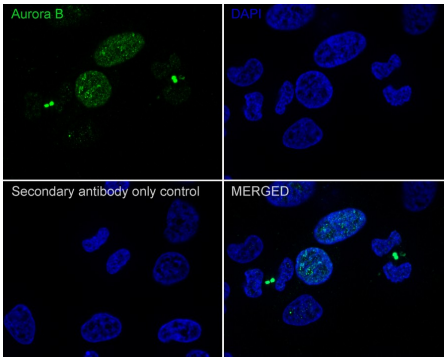

Fig4: Immunocytochemistry analysis of HeLa cells labeling Aurora B with Rabbit anti-Aurora B antibody (ET1610-25) at 1/100 dilution.

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 Rabbit anti-Aurora B antibody (ET1610-25) at 1/100 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.

Background References

1. Petsalaki E & Zachos G Clks 1, 2 and 4 prevent chromatin breakage by regulating the Aurora B-dependent abscission checkpoint. Nat Commun 7:11451 (2016).
2. Jiang J et al. Cardiac myosin binding protein C regulates postnatal myocyte cytokinesis. Proc Natl Acad Sci U S A 112:9046-51 (2015).