

Anti-AURKB Antibody (8S661)

Product Details

| | |
|---------------|-------------------------|
| Ig Type: | Rabbit IgG |
| Reactivity: | Human |
| Conjugation: | Unconjugated |
| Clone: | 8S661 |
| Purification: | Affinity-chromatography |

Applications

1. Western Blot

- Positive WB detected in: Hela whole cell lysate, Jurkat whole cell lysate, 293 whole cell lysate, MCF-7 whole cell lysate, U251 whole cell lysate, A549 whole cell lysate, HepG2 whole cell lysate
- All lanes: AURKB antibody at 1:2000
- Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution
- Predicted band size: 40, 36, 17, 35 kDa
- Observed band size: 40 kDa

2. IHC image of TMAH-00097 diluted at 1:100 and staining in paraffin-embedded human tonsil tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Verified Activity:

3. IHC image of TMAH-00097 diluted at 1:100 and staining in paraffin-embedded human cervical cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

4. Immunoprecipitating AURKB in Hela whole cell lysate

- Lane 1: Rabbit control IgG instead of TMAH-00097 in Hela whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
- Lane 2: TMAH-00097(2µg)+ Hela whole cell lysate(500µg)
- Lane 3: Hela whole cell lysate (10µg)

Application: ELISA, WB, IHC, IP

Recommended WB:1:500-1:5000; IHC:1:50-1:200; IP:1:200-1:1000.

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: A synthetic peptide: Human Aurora B

Antigen Species: Human

Gene ID: 9212

Uniprot ID: Q96GD4

Synonyms: Serine/threonine-protein kinase 5; Serine/threonine-protein kinase 12; EC 2.7.11.1; AIK2; Aurora 1; STK12; AIM1; ARK2; Aurora kinase B; Aurora- and IPL1-like midbody-associated protein 1; ARK-2; AIRK2; STK-1; STK1; Aurora/IPL1-related kinase 2; STK5; AIM-1; Serine/threonine-protein kinase aurora-B; Aurora-related kinase 2

Biology Area: Epigenetics and Nuclear Signaling, Cancer, Cell biology, Signal transduction

Research Background

Serine/threonine-protein kinase component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis. The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly. Involved in the bipolar attachment of spindle microtubules to kinetochores and is a key regulator for the onset of cytokinesis during mitosis. Required for central/midzone spindle assembly and cleavage furrow formation. Key component of the cytokinesis checkpoint, a process required to delay abscission to prevent both premature resolution of intercellular chromosome bridges and accumulation of DNA damage: phosphorylates CHMP4C, leading to retain abscission-competent VPS4 (VPS4A and/or VPS4B) at the midbody ring until abscission checkpoint signaling is terminated at late cytokinesis. AURKB phosphorylates the CPC complex subunits BIRC5/survivin, CDCA8/borealin and INCENP. Phosphorylation of INCENP leads to increased AURKB activity. Other known AURKB substrates involved in centromeric functions and mitosis are CENPA, DES/desmin, GPAF, KIF2C, NSUN2, RACGAP1, SEPTIN1, VIM/vimentin, HASPIN, and histone H3. A positive feedback loop involving HASPIN and AURKB contributes to localization of CPC to centromeres. Phosphorylation of VIM controls vimentin filament segregation in cytokinetic process, whereas histone H3 is phosphorylated at 'Ser-10' and 'Ser-28' during mitosis (H3S10ph and H3S28ph, respectively). A positive feedback between HASPIN and AURKB contributes to CPC localization. AURKB is also required for kinetochore localization of BUB1 and SGO1. Phosphorylation of p53/TP53 negatively regulates its transcriptional activity. Key regulator of active promoters in resting B- and T-lymphocytes: acts by mediating phosphorylation of H3S28ph at active promoters in resting B-cells, inhibiting RNF2/RING1B-mediated ubiquitination of histone H2A and enhancing binding and activity of the USP16 deubiquitinase at transcribed genes.

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