Data Sheet (Cat.No.TMAH-01150)

Anti-SUMO1 Antibody (7D710)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7D710
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. IHC image of TMAH-01150 diluted at 1:92.5 and staining in paraffin-embedded human adrenal gland tissue performed on a Leica BondTM 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 biotinylated secondary antibody and visualized using an HRP conjugated SP system. 2. IHC image of TMAH-01150 diluted at 1:92.5 and staining in paraffin-embedded human liver cancer performed on a Leica BondTM 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 biotinylated secondary antibody and visualized using an HRP conjugated SP system. 3. Immunoprecipitating SUMO1 in 293T whole cell lysate Lane 1: Rabbit control IgG instead of TMAH-01150 in 293T whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000) Lane 2: TMAH-01150 (3μg) + 293T whole cell lysate (500μg) Lane 3: 293T whole cell lysate (20μg) 4. Overlay histogram showing Hela cells stained with TMAH-01150 (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then permeabilized with 0.3% Triton X-100 for 2 min. The cells were then incubated in 1x PBS /10% normal goat serum to block non-specific protein-protein interactions followed by primary antibody for 1 h at 4°C. The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4°C. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA, IHC, FCM, IP
Recommended	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 SUMO1
Antigen Species:	Human
Gene ID:	7341
Uniprot ID:	P63165
Synonyms:	GMP 1;SMT3H3;Ubiquitin Like 1;SENP2;GAP modifying protein 1;Sentrin 1;SMT3 suppressor of mif two 3 homolog 1;Smt3C;DAP1;SUMO-1;UBL 1;PIC1;Ubiquitin like protein SMT3C;OFC10; UBL1;Sentrin;SMT3;Small ubiquitin related modifier 1;PIC 1;Ubiquitin homology domain protein PIC1;GMP1;Ubiquitin like protein UBL1;Small ubiquitin-like modifier 1;SMT3 homolog 3
Biology Area:	Cell Biology

Research Background

Ubiquitin-like protein that can be covalently attached to proteins as a monomer or a lysine-linked polymer. Covalent attachment via an isopeptide bond to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by E3 ligases such as PIAS1-4, RANBP2 or CBX4. This post-translational modification on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Involved for instance in targeting RANGAP1 to the nuclear pore complex protein RANBP2. Covalently attached to the voltage-gated potassium channel KCNB1; this modulates the gating characteristics of KCNB1. Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. May also regulate a network of genes involved in palate development. Covalently attached to ZFHX3.

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