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SPOP Rabbit mAb

Catalog # AP76115

Product Information

Application	WB
Primary Accession	O43791
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	42132

Additional Information

Gene ID	8405
Other Names	SPOP
Dilution	WB~~1:500-1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	SPOP (HGNC:11254)
Function	Component of a cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex that mediates the ubiquitination of target proteins, leading most often to their proteasomal degradation. In complex with CUL3, involved in ubiquitination and proteasomal degradation of BRMS1, DAXX, PDX1/IPF1, GLI2 and GLI3. In complex with CUL3, involved in ubiquitination of MACROH2A1 and BMI1; this does not lead to their proteasomal degradation. Inhibits transcriptional activation of PDX1/IPF1 targets, such as insulin, by promoting PDX1/IPF1 degradation. The cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex containing homodimeric SPOP has higher ubiquitin ligase activity than the complex that contains the heterodimer formed by SPOP and SPOPL. Involved in the regulation of bromodomain and extra-terminal motif (BET) proteins BRD2, BRD3, BRD4 stability (PubMed:32109420). Plays an essential role for proper translation, but not for their degradation, of critical DNA replication licensing factors CDT1 and CDC6, thereby participating in DNA synthesis and

cell proliferation (PubMed:36791496). Regulates interferon regulatory factor 1/IRF1 proteasomal turnover by targeting S/T-rich degrons in IRF1 (PubMed:37622993). Facilitates the lysosome-dependent degradation of enterovirus EV71 protease 2A by inducing its 'Lys-48'- linked polyubiquitination, which ultimately restricts EV71 replication (PubMed:37796126). Acts as an antiviral factor also against hepatitis B virus/HBV by promoting ubiquitination and subsequent degradation of HNF1A (PubMed:38018242). In turn, inhibits HBV transcription and replication by preventing HNF1A stimulating activity of HBV preS1 promoter and enhancer II (PubMed:38018242). Involved in ubiquitination of BRDT and promotes its degradation, thereby regulates histone removal in early condensing spermatids prior to histone-to-protamine exchange (By similarity).

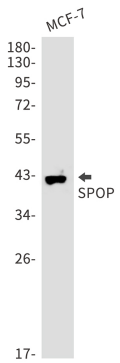
Cellular Location Nucleus. Nucleus speckle Cytoplasm

Tissue Location Widely expressed..

Background

The SPOP (TEF2) protein was previously identified as an autoantigen in a patient with scleroderma pigmentosum. SPOP (speckle-type POZ protein), also known as TEF2, HIB homolog 1 or Roadkill homolog 1, is a member of the Tdpoz family containing one N-terminal MATH (Meprin and TRAF Homology) domain and one C-terminal BTB/POZ domain. SPOP can exist as a homodimer and is expressed in a variety of tissues localizing to the nucleus. BTB-mediated SPOP dimers form linear oligomers via BACK domain dimerization, and we determine the concentration-dependent populations of the resulting oligomeric species (PMID: 27220849). Through an interaction with CUL-3, SPOP is involved in ubiquitinylation and protein degradation. SPOP specifically interacts with CUL-3 via its BTB/POZ domain and recruits substrates to the CUL-3-based ubiquitin ligase via its MATH domain. Substrates recruited by SPOP and targeted for ubiquitylation via the CUL-3/SPOP complex include PDX-1, Bmi-1, MacroH2A, PIPK II ∫ and Daxx. These substrates are subsequently degraded by the proteasome. In addition, SPOP itself becomes ubiquitylated by the CUL-3-based ubiquitin ligase and is targeted for proteasomal degradation.

Images



Western blot analysis of SPOP in MCF-7 lysates using SPOP antibody.

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