Datasheet for ABIN2452137

anti-SUMO1 antibody (full length) (Biotin)

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Overview

Quantity:	50 µg
Target:	SUMO1
Binding Specificity:	full length
Reactivity:	Human
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This SUMO1 antibody is conjugated to Biotin
Application:	Western Blotting (WB), ELISA, Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Immunogen:	Recombinant GST-fused human SUMO1 (full length)
Clone:	4D12
Isotype:	IgG2a kappa
Specificity:	Specific to human, simian, mouse and rat SUMO1.
Cross-Reactivity (Details):	Not tested for other species
Purification:	The antibody was produced in serum-free medium and purified by proprietary chromatography procedures under mild conditions and conjugated with biotin.
Sterility:	Sterile filtered

Target Details

Target:	SUMO1
Alternative Name:	SUMO1 (SUMO1 Products)
Background:	SUMO (Small Ubiquitin-like Modifier) proteins are a family of small proteins that are covalently attached to and detached from other proteins in cells to modify their function. Unlike ubiquitination, which targets proteins for degradation, SUMO modification plays a critical role in a number of cellular functions including nucleocytoplasmic transport, gene expression, cell cycle and formation of subnuclear structures such as promyelocytic leukemia (PML) bodies. There are three confirmed SUMO isoforms in human, SUMO1, SUMO2 and SUMO3. SUMO2 /3 show a high degree of similarity to each other and are distinct from SUMO1. Individual SUMO family members are all targeted to different proteins with diverse biological functions. SUMO-1 is conjugated to RanGAP, PML, p53 and IkappaB-alpha to regulate nuclear trafficking, formation of subnuclear structures, regulation of transcriptional activity and protein stability. SUMO1 is encoded as a 101 aa protein and first Met and C-terminal 4 aa are removed from the preprotein.
UniProt:	P63165
Pathways:	M Phase, Positive Regulation of Endopeptidase Activity, Protein targeting to Nucleus, Ubiquitin Proteasome Pathway

Application Details

Application Notes:	1. Western blotting: 1/1,000 dilution 2. Immunofluorescence staining: 1/100 dilution 3. Immunohistochemistry,frozen section: 1/100 dilution 4. ELISA (assay dependent) Other applications have not been tested.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS (x1), 50 % glycerol. Azide and carrier free.
Preservative:	Azide free
Storage:	-20 °C

Publications

Product cited in:

Ulrich: "The fast-growing business of SUMO chains." in: **Molecular cell**, Vol. 32, Issue 3, pp. 301-5, (2008) (PubMed).

Saitoh, Uchimura, Tachibana, Sugahara, Saitoh, Nakao: "In situ SUMOylation analysis reveals a modulatory role of RanBP2 in the nuclear rim and PML bodies." in: **Experimental cell research**, Vol. 312, Issue 8, pp. 1418-30, (2006) (PubMed).

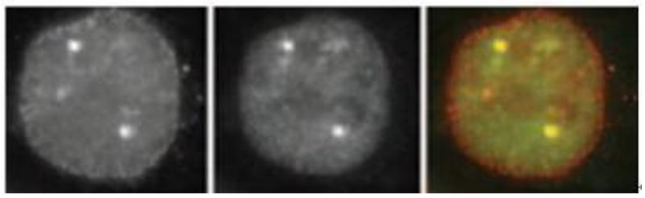
Uchimura, Ichimura, Uwada, Tachibana, Sugahara, Nakao, Saitoh: "Involvement of SUMO modification in MBD1- and MCAF1-mediated heterochromatin formation." in: **The Journal of biological chemistry**, Vol. 281, Issue 32, pp. 23180-90, (2006) (PubMed).

Cheng, Bawa, Lee, Gong, Yeh: "Role of desumoylation in the development of prostate cancer." in: **Neoplasia (New York, N.Y.)**, Vol. 8, Issue 8, pp. 667-76, (2006) (PubMed).

Images

Immunofluorescence

Image 1.



Immunofluorescence

Image 2.

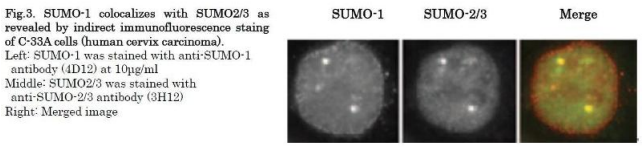


Fig.3. SUMO-1 colocalizes with SUMO2/3 as revealed by indirect immunofluorescence staing of C-33A cells (human cervix carcinoma).
Left: SUMO-1 was stained with anti-SUMO-1 antibody (4D12) at 10μg/ml
Middle: SUMO2/3 was stained with anti-SUMO-2/3 antibody (3H12)
Right: Merged image

Immunofluorescence

Image 3.

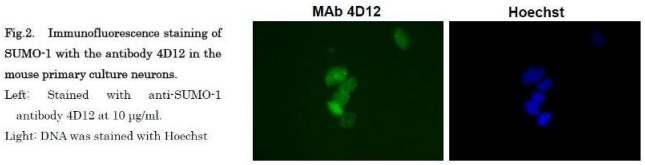


Fig.2. Immunofluorescence staining of SUMO-1 with the antibody 4D12 in the mouse primary culture neurons.
Left: Stained with anti-SUMO-1 antibody 4D12 at 10 μg/ml.
Light: DNA was stained with Hoechst