Anti-SUMO1 antibody, rat monoclonal (4D12) (FITC)

Product code	70-655
Size	50 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium.
Immunogen	Purified recombinant GST-fused human SUMO1 (full length)
Isotype	Rat IgG 2aκ
Reactivity	Specific to human, simian, mouse and rat SUMO1. Other species have not been tested.
Special notes	Conjugation: FITC
Application	1. Immunofluorescence staining (1/100 dilution) 2. Immunohistochemistry, frozen section (1/100 dilution)
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 SUMO-1. Individual SUMO family members are all targeted to different proteins with diverse biological functions. SUMO-1 is conjugated to RanGAP, PML, p53 and IκB-α 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.
Data Link	Swiss-Prot P63165 **(human)**

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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Data Images: 70-655 Anti-SUMO1 antibody, rat monoclonal (4D12) (FITC)

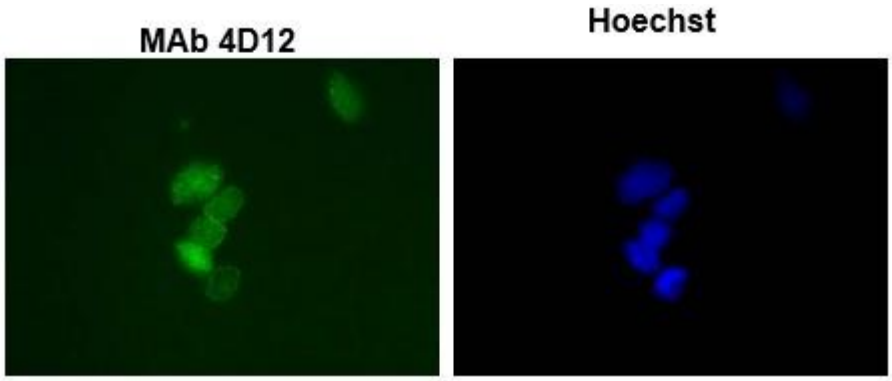

Fig.1. Immunofluorescence staining of SUMO-1 with the antibody 4D12 in the mouse primary culture neurons.

Left: Stained with anti-SUMO-1 antibody 4D12 at 10 µg/ml.

Light: DNA was stained with Hoechst

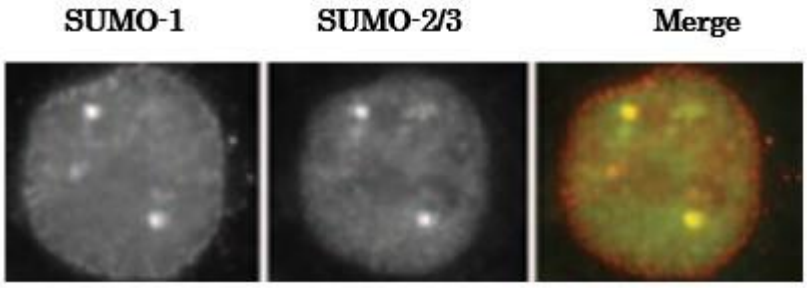

Fig.2. SUMO-1 colocalizes with SUMO-2/3 as revealed by indirect immunofluorescence staining of C-33A cells (human cervix carcinoma).

Left: SUMO-1 was stained with anti-SUMO-1 antibody (4D12) at 10 µg/ml

Middle: SUMO-2/3 was stained with anti-SUMO-2/3 antibody (3H12).

Right: Merged image

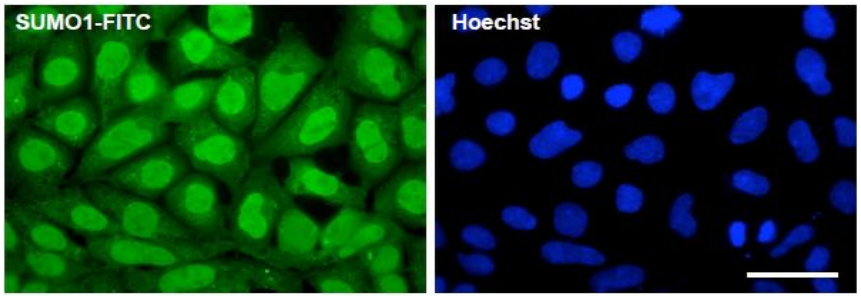

Fig.3 Fluorescence immunocytochemistry for endogenous SUMO1 expression.

HEK293A cells were fixed, permeabilized, and stained with SUMO1-FITC (1: 50) antibody and Hoechst 33342. Scale bar, 50 mm.

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References: This antibody was used in Ref. 3 and 4.

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