SunLong Biotech Co.,LTD
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Mouse Anti-SUFU antibody

SLM-51651M

Product Name	SUFU
Chinese Name	SUFU 单克隆抗体
Alias	SU FU; SU(F)U; Su(fu); SUFU_HUMAN; SUFUH; SUFUXL; Suppressor of fused homolog (Drosophila); Suppressor of fused homolog; OTTHUMP00000020374; OTTHUMP00000020377; OTTHUMP00000020379; PRO1280.
Research Area	Tumour transcriptional regulatory factor Epigenetics
Immunogen Species	Mouse
Clonality	Monoclonal
Clone NO.	D6S12
React Species	Human,Mouse(predicted:Monkey)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	53/106kDa
Cellular localization	The nucleus cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human SUFU
Lsotype	IgG1,k
Purification	affinity purified by Protein G
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

Product Detail

SUFU is a key negative regulator in the vertebrate Hedgehog signaling pathway. SUFU interacts with genes encoding proteins in this signal transduction pathway. In Drosophila, Intracellular transduction of the Hedgehog pathway involves the release of a large complex containing SUFU. SUFU inhibits the activity of the transcription factor Gli1 and interacts with Gli2, Gli3 and the serine/threonine kinase Fused. SUFU is widely expressed in adult and embryonic tissues with higher expression in tissues patterned by hegdehog signaling. The SUFU gene locus maps to a region that is deleted in glioblastomas, prostate cancer, malignant melanoma and endometrial cancer.

Function:
Negative regulator in the hedgehog signaling pathway. Down-regulates GLI1-mediated transactivation of target genes. Part of a corepressor complex that acts on DNA-bound GLI1. May also act by linking GLI1 to BTRC and thereby targeting GLI1 to degradation by the proteasome. Sequesters GLI1, GLI2 and GLI3 in the cytoplasm, this effect is overcome by binding of STK36 to both SUFU and a GLI protein. Negative regulator of beta-catenin signaling. Regulates the formation of either the repressor form (GLI3R) or the activator form (GLI3A) of the full length form of GLI3 (GLI3FL). GLI3FL is complexed with SUFU in the cytoplasm and is maintained in a neutral state. Without the Hh signal, the SUFU-GLI3 complex is recruited to cilia, leading to the efficient processing of GLI3FL into GLI3R. When Hh signaling is initiated, SUFU dissociates from GLI3FL and the latter translocates to the nucleus, where it is phosphorylated, destabilized, and converted to a transcriptional activator (GLI3A).

Subunit:
May form homodimers. Part of a DNA-bound corepressor complex containing SAP18, GLI1 and SIN3. Part of a complex containing CTNNB1. Binds BTRC, GLI2, GLI3, SAP18 and STK36. Binds both free and DNA-bound GLI1. Interacts with KIF7. Interacts with GLI3FL and this interaction regulates the formation of either repressor or activator forms of GLI3. Its association with GLI3FL is regulated by Hh signaling and dissociation of the SUFU-GLI3 interaction requires the presence of the ciliary motor KIF3A. Interacts with ULK3; inactivating the protein kinase activity of ULK3.

Subcellular Location:
Cytoplasm. Nucleus.

Tissue Specificity:
Ubiquitous in adult tissues. Detected in osteoblasts of the perichondrium in the developing limb of 12-week old embryos. Isoform 1 is detected in fetal brain, lung, kidney and testis. Isoform 2 is detected in fetal testis, and at much lower levels in fetal brain, lung and kidney.

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DISEASE:
Defects in SUFU are a cause of medulloblastoma (MDB) [MIM:155255]. MDB is a malignant, invasive embryonal tumor of the cerebellum with a preferential manifestation in children. Defects in SUFU play a role in predisposition to desmoplastic MDB. These tumors make up about 20 to 30% of medulloblastomas, have a more nodular architecture than 'classical' medulloblastoma, and may have a better prognosis.

Similarity:
Belongs to the SUFU family.

SWISS:
Q9UMX1

Gene ID:
51684

Database links:

Entrez Gene: 51684 Human

SwissProt: Q9UMX1 Human

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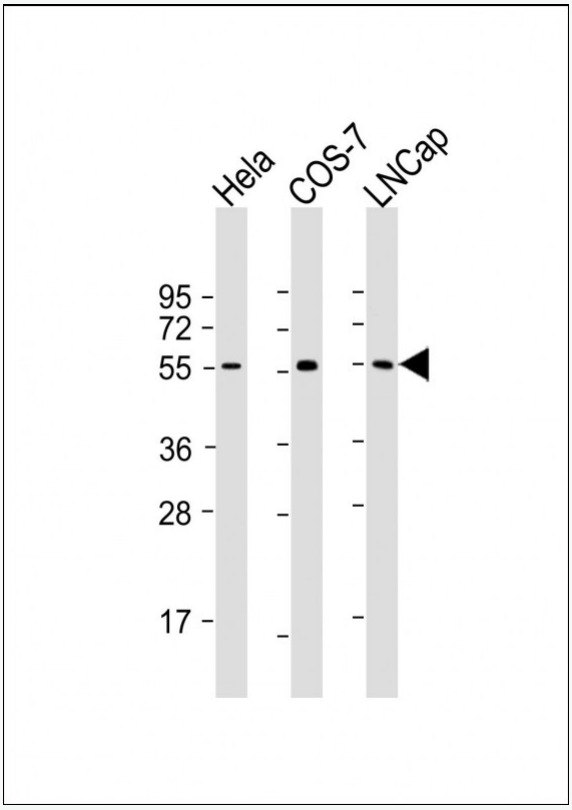
Product Picture



Sample:

Lane 1: Hela cell lysates

Lane 2: COS-7 cell lysates

Lane 3: LNCap cell lysates

Primary: Anti-SUFU (SLM-51651M) at 1/2000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: 53/106 kD

Observed band size: 55 kD

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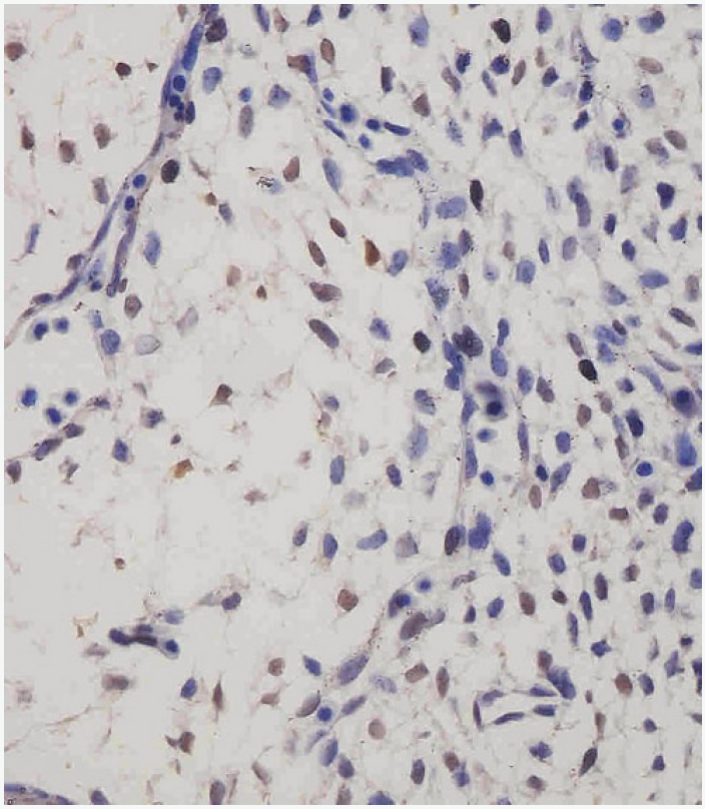

Paraformaldehyde-fixed, paraffin embedded (mouse embryo tissue sections); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SUFU) Monoclonal Antibody, Unconjugated (SLM-51651M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.