



## SUFU Polyclonal Antibody

Catalog No	E93273	Lot Number	P00009
Applications	IHC IF	Quantity	100ul, 100ug/ul
Cross-Reactivity	H M R	Calculated MW	54kDa

### Immunogen Information

Immunogen	Recombinant protein of human SUFU
Gene ID	51684
Swiss Prot	Q9UMX1
Synonyms	SUFUH; SUFUXL; PRO1280;

### Product information

Species	Rabbit
Isotype	IgG
Purity	Affinity purification
Storage	Store at -20°C or -80°C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

### Background

SUFU (Suppressor of Fused) was identified in *Drosophila* as a suppressor of the Fused (Fu) kinase that is essential for Hedgehog signaling during embryonic pattern formation (1). SUFU suppresses Hedgehog signaling by regulating the localization of the transcription factors Gli and Ci (2,3). In *Drosophila*, SUFU may also positively regulate Hedgehog signaling depending on SUFU protein levels and Hedgehog signal intensity (4). SUFU may function as a tumor suppressor as inactivation and loss of heterozygosity of SUFU is associated with human rhabdomyosarcomas and medulloblastomas (5,6). Deletion of SUFU in mice results in embryonic lethality, while heterozygotes exhibit developmental defects characteristic of basal cell nevus syndrome. This aberrant developmental pathway is attributed to ligand-independent activation of Hedgehog signaling (7). GSK-3 $\beta$  binds and phosphorylates SUFU in vitro and additional information predicts that GSK-3 $\beta$  may positively regulate Hedgehog signaling through modification of SUFU (8).

### References

1. Pham, A. et al. (1995) *Genetics* 140, 587-598.
2. Barnfield, P.C. et al. (2005) *Differentiation* 73, 397-405.
3. Méthot, N. and Basler, K. (2000) *Development* 127, 4001-4010.
4. Dussillol-Godar, F. et al. (2006) *Dev. Biol.* 291, 53-66.
5. Tostar, U. et al. (2006) *J. Pathol.* 208, 17-25.
6. Taylor, M.D. et al. (2002) *Nat. Genet.* 31, 306-310.
7. Svärd, J. et al. (2006) *Dev. Cell.* 10, 187-197.
8. Takenaka, K. et al. (2007) *Biochem. Biophys. Res. Commun.* 353, 501-508.

### Recommended Dilutions

IHC	1:50- 1:100
IF	1:20- 1:50