

SUFU Blocking Peptide (C-term)
Synthetic peptide
Catalog # BP21656b**Specification**

SUFU Blocking Peptide (C-term) - Product InformationPrimary Accession [Q9UMX1](#)**SUFU Blocking Peptide (C-term) - Additional Information****Gene ID** 51684**Other Names**

Suppressor of fused homolog, SUFUH, SUFU

Target/Specificity

The synthetic peptide sequence is selected from aa 328-341 of HUMAN SUFU

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SUFU Blocking Peptide (C-term) - Protein Information**Name** SUFU {ECO:0000303|PubMed:12068298, ECO:0000312|HGNC:HGNC:16466}**Function**

Negative regulator in the hedgehog/smoothened signaling pathway (PubMed:10559945, PubMed:10564661, PubMed:10806483, PubMed:12068298, PubMed:12975309, PubMed:27234298, PubMed:15367681, PubMed:22365972, PubMed:24217340, PubMed:24311597, PubMed:28965847).

Down-regulates GLI1-mediated transactivation of target genes (PubMed:15367681, PubMed:24217340, PubMed:24217340, PubMed:24217340).

href="http://www.uniprot.org/citations/24311597" target="_blank">24311597). Down-regulates GLI2-mediated transactivation of target genes (PubMed:24311597, PubMed:24217340). 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 (PubMed:10559945, PubMed:10564661, PubMed:10806483, PubMed:24217340). Sequesters GLI1, GLI2 and GLI3 in the cytoplasm, this effect is overcome by binding of STK36 to both SUFU and a GLI protein (PubMed:10559945, PubMed:10564661, PubMed:10806483, PubMed:24217340). Negative regulator of beta-catenin signaling (By similarity). Regulates the formation of either the repressor form (GLI3R) or the activator form (GLI3A) of the full-length form of GLI3 (GLI3FL) (PubMed:24311597, PubMed:28965847). GLI3FL is complexed with SUFU in the cytoplasm and is maintained in a neutral state (PubMed:24311597, PubMed:28965847). Without the Hh signal, the SUFU- GLI3 complex is recruited to cilia, leading to the efficient processing of GLI3FL into GLI3R (PubMed:24311597, PubMed:28965847). 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) (PubMed:24311597, PubMed:28965847). Required for normal embryonic development (By similarity). Required for the proper formation of hair follicles and the control of epidermal differentiation (By similarity).

Cellular Location

Cytoplasm. Nucleus

Tissue Location

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.

SUFU Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

SUFU Blocking Peptide (C-term) - Images

SUFU Blocking Peptide (C-term) - Background

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). Required for the proper formation of hair follicles and the control of epidermal differentiation (By similarity).

SUFU Blocking Peptide (C-term) - References

Stone D.M.,et al.J. Cell Sci. 112:4437-4448(1999).
Kogerman P.,et al.Nat. Cell Biol. 1:312-319(1999).
Taylor M.D.,et al.Nat. Genet. 31:306-310(2002).
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).
Deloukas P.,et al.Nature 429:375-381(2004).