

Active Recombinant Human WIF1 protein, His-tagged

Cat. No. WIF1-268H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human WIF1(Gly29-Trp379) fused with His tag at C-terminal was expressed in NS0.
Species	Human
Source	Mammalian Cells
ProteinLength	Gly29-Trp379
Description	WIF (Wnt Inhibitory Factor) is a secreted protein that binds to Wnt proteins and inhibits their activity. The protein is synthesized as a 379 amino acid (AA) molecule that contains an N-terminal signal sequence, 150 AA WIF domain, 5 EGF-like repeats, and a hydrophilic domain at the carboxy terminus. In situ hybridization analysis from the frog, <i>Xenopus laevis</i>, and zebrafish indicate that the message is highly expressed in presomitic mesoderm, the notochord, anterior regions of the brain, branchial arches, nasal placodes, and otic vesicles. WIF inhibits secondary axis induction by Wnts and promotes secondary axis induction by Chordin in <i>Xenopus</i> embryos. In vitro, WIF binds to <i>Drosophila</i> Wingless and <i>Xenopus</i> Wnt8 proteins. WIF-1 is implicated as an early event tumor suppressor in cancers of the prostate, breast, lung and bladder. However, WIF-1's role in carcinogenesis may not be that simple since in other cancer types, such as colon adenocarcinoma, WIF facilitates tumorigenesis. Human WIF-1 shares 94% and 82% amino acid identity with mouse and frog, respectively.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Predicted N Terminal	Gly29
Form	Lyophilized from a 0.2 µm filtered solution in Acetic Acid, NaCl, PEG3350 and CHAPS with BSA as a carrier protein.
Bio-activity	Measured by its ability to inhibit Wnt-3a-induced alkaline phosphatase production by MC3T3-E1 mouse preosteoblast cells. The ED50 for this effect is typically 0.3-1.5 µg/mL in the presence of 10 ng/mL of Wnt-3a.
Molecular Mass	Predicted Molecular Mass: 39.8 kDa; SDS-PAGE: 50 kDa, reducing conditions.
Endotoxin	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 200 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name	WIF1 WNT inhibitory factor 1 [Homo sapiens]
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Official Symbol	WIF1
Synonyms	WIF1; WNT inhibitory factor 1; wnt inhibitory factor 1; WIF-1;
Gene ID	11197
mRNA Refseq	NM_007191
Protein Refseq	NP_009122
MIM	605186
UniProt ID	Q9Y5W5
Chromosome Location	12q14.2
Pathway	Presenilin action in Notch and Wnt signaling, organism-specific biosystem; Wnt signaling network, organism-specific biosystem; Wnt signaling pathway, organism-specific biosystem; Wnt signaling pathway, conserved biosystem;
Function	protein tyrosine kinase activity;

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