



Recombinant Human Tissue Factor

20180504BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-159S
Size:	5 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	7484
Synonyms:	WNT15, WNT14B, UNQ6973/PRO21956

Formerly known as Wnt-15 or Wnt-14b, Wnt-9b is a secreted glycoprotein belonging to the Wnt family of signaling proteins that are critically involved in maintaining the integrity of both embryonic and adult tissues. Wnt-9b is primarily expressed in adult kidneys and during late embryogenesis, and shares with other Wnt family members the same highly conserved lipid-modified, cysteine-rich domain essential for cell signaling. As is true for most Wnt family members, Wnt-9b functions through the biochemical process known as the canonical Wnt pathway; during which Wnt proteins bind to and activate seven-pass transmembrane receptors of the Frizzled family, and ultimately result in the disruption of β -catenin degradation. Intracellular accumulation of β -catenin increases translocation of the protein into the nucleus, where it binds to TCF/LEF transcription factors to promote the expression of numerous genes. In this manner, Wnt signaling induces and maintains transformed phenotype, and, in certain embryonic cell lines, supports self-renewal in the absence of significant differentiation. While increased Wnt/ β -catenin signaling is associated with tumorigenesis in a diverse set of human cancers, lack of Wnt signaling disrupts transcriptional activation of tumor suppressor genes, and has been shown to result in neoplastic transformation, oncogenesis, and human degenerative diseases. Altered Wnt-9b expression has been shown to result in the underdevelopment of the kidneys, and incomplete lip and cleft fusion in mice. Recombinant Human Wnt-9b is a monomeric glycoprotein containing 335 amino acid residues and has a calculated molecular weight of 36.9 kDa. Due to glycosylation, Recombinant Human Wnt-9b migrates at an apparent molecular weight of approximately 49-54 kDa by SDS-PAGE analysis under non-reducing conditions.

Sequence

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SYFGLTGREV LTPFPGLGTA AAPAQGGAHL KQCDDLKLSR
RQKQLCRREP GLAETLRDAA HLGLEECQFQ FRHERWNC SL
EGRMGLLKRK FKETAFLYAV SSAALHTLA RACSAGRMER
CTCDDSPGLE SRQAWQWVC GDNLKYSTKF LSNFLGSKRG
NKDLRARADA HNTHVGIKAV KSGLRRTCKC HGVSGSCAVR
TCWKQLSPFR ETGQVLKLRV DSAVKVSSAT NEALGRLELW
APARQGS LTK GLAPRSGDLV YMEDSPSFCR PSKYSPTAG
RVCSREASCS SLCCGRGYDT QSRLVAFSCH CQVQWCYVE
CQQCVQEEELV YTCKH

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Database References

Protein RefSeq:	NP_003387.1
Uniprot ID:	O14905
mRNA RefSeq:	NM_003396.2

Product Specifications

Expressed in	CHO cells
Purity	> 95% by SDS-PAGE & HPLC analyses
Endotoxin level	< 0.1 ng/µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	335
MW:	49-54 kDa (non-reducing conditions)



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Determined by its ability to induce alkaline phosphatase production by CCL-226 cells.