



Recombinant Human Soluble CD105/Endoglin

20170811BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	S01-024
Size:	5 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>ENG</i>
Synonyms:	Endoglin; END; ORW; HHT1; ORW1; CD105

A cDNA sequence encoding the extracellular domain of human Endoglin (Met 1 - Leu 586) was expressed in insect cells. Human Endoglin is a disulfide-linked homodimeric protein. Based on N-terminal sequence analysis, the primary structure of recombinant mature Endoglin starts at Glu 26. Endoglin has a calculated monomeric molecular mass of 61kDa but as a result of glycosylation, migrates at approximately 70 - 75kDa under reducing conditions in SDS-PAGE. Endoglin, also known as CD105, is a Type I integral membrane glycoprotein with a large, disulfide-linked, extracellular region and a short, constitutively phosphorylated, cytoplasmic tail. Two splice variants of human endoglin, the S-endoglin and L-endoglin that differ in the length of their cytoplasmic tails have been identified. Endoglin is highly expressed on vascular endothelial cells, chondrocytes, and syncytiotrophoblasts of term placenta.

It is also found on activated monocytes, bone marrow progenitor erythroblasts, and leukemic cells of lymphoid and myeloid lineages. Human and mouse endoglin share approximately 70% and 97 % amino acid sequence identity in their extracellular and intracellular domains, respectively. Endoglin has been shown to be a powerful marker of neovascularization. It is also useful as a functional marker that defines long-term repopulating hematopoietic stem cells.

References

1. Cheifetz et al., J Biol Chem 267:19027, 1992
2. Parker et al., J Bone Miner Res 18:289, 2003
3. Barbara et al., J Biol Chem 274:584, 1999
4. Arthur et al., Dev Biol 217:42, 2000
5. McAllister et al., Nature Genet 8:345, 1994
6. Fonsatti et al., J Cell Physiol 188:1, 2001].

Sequence

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ETVHCDDLQFVGPGERGEVYTTTSQVSKGCVQAQAPNAILEVHVLFLEFPTGPSQ
LELTLQASKQNGTWPREVLLVLSVNSSVFLHLQALGIPHLHAYNSSLVTFQE
PPGVNNTTELPSFPKTQILEWAAERGPITSAAEALNDPQSILLRLGQAQGSLSF
CMLEASQDMGRITLEWRPRTPALVRGCHLEGVAGHKEAHILRVLPGHSAGPRT
VTVKVELSCAPGDLDAVLILQGPYPVSWLIDANHMQUIWTTGEYSFKIFPEK
NIRGFKLPDTPQGLLGEARMLNASIVASFVELPLASIVSLHASSCGRLQTS
PAPIQTTPPKDTCSPPELLMSLIQTKCADDAMTLVLKELVAHLKCTITGLTF
WDPSCAEADRGDKFVLRSAISSCGMQVSASMSINEAVNILLSSSPQRKRVH
CLNMDLSLFSQGLGLYLSPHFLQASNTIEPGQSFVQVRVSPVSEFLLQLDSC
HLDLGPPEGTVELIQGRAAKGNCVSLSPSPGDRFRFSPLLHFYTVPIPKTG
TLCTVALRPKTGSQDQEVHRTVFMRLNIISPDLSGCTSHHHHHH
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Database References

Protein RefSeq:	NP_000109
Uniprot ID:	P17813
mRNA RefSeq:	NM_000118

Product Specifications

Expressed in	Insect cells
Purity	> 90% by SDS-PAGE
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	565
MW:	70 - 75 kDa (Monomer)

Stability: Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sCD105 should be stored in working aliquots at -20°C.

Reconstitution: The lyophilized sCD105 is soluble in water and most aqueous buffers and should be reconstituted in PBS or medium to a concentration not lower than 50µg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Not tested so far.



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Handling/Application

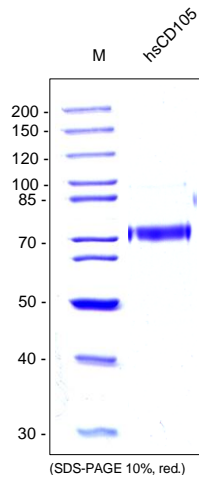


Fig. 1: SDS-PAGE analysis of recombinant human soluble CD105 from insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.