



Recombinant Mouse Soluble CD105/Endoglin



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	S01-023
Size:	25 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>Egn</i>
Synonyms:	Cell surface MJ7/18 antigen, CD105, Endoglin

A DNA sequence encoding the extracellular domain of mouse Endoglin (Met 1 - Gly 581) was expressed in insect cells. Mouse 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 61 kDa but as a result of glycosylation, migrates at approximately 70 - 75 kDa 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 pro-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 binds TGF-β1 and TGF-β3 but not TGF-β2 efficiently by associating with TGF-β type II receptor (TβRII).

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. McAllister *et al.*, Nature Genet 8:345, 1994
5. Chen *et al.*, Proc Natl Acad Sci 99:15468, 2002

Sequence

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ERVGCDLQFVDPTRGEVFTTTSQVSEGCVAQAANAVREVHVLFLDFPGMLSH
LELTQASKQNGTETQEVLVLSNKNVFKQAPEIPLHLAYDSSLVIFQG
QPRVNIIVLPSLTSRKQILDWAATKGAITSIAALDDPQSIIVLQLGQDPKAPF
LCLPEAHKDMGATLEWQPRAQTPVQSCRLEGVSGHKEAYILRILPGSEAGPR
TVTVMELSCSTSGDAIILHGGPPYVSWFIDINHSMQIILTGEYSVKIFFPGSK
VKGVELPDTFQGLIAEARKLNASIVTSFVELPLVSNVSLRASSCGGVFQTFP
APVVTTPPKDTCSPVLLMSLIQPKCGNQVMTLALNKKHVQTLQCTITGLTFW
DSSCQAEDTDDHLVLSAYSSCGMKVTAHVVSNEVIISFPSSGSPPLRKKVQC
IDMDSLFLGLYLSPHFLQASNTIELGQAFVQVSVSPLTSEVTVQLDSCH
LDLGPEDMVELIQSRTAKGSCVTLSPSPGDPFRFSFLLRVYVMPPTTAGT
LSCNLALRPSTLSQEVYKTVSMRLNIVSPDLSHHHHHH
  
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Database References

Protein RefSeq:	NP_031958.2
Uniprot ID:	Q63961
mRNA RefSeq:	NM_007932.2

Product Specifications

Expressed in	Insect cells
Purity	> 90% by SDS-PAGE
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	558
MW:	70-75 kDa

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

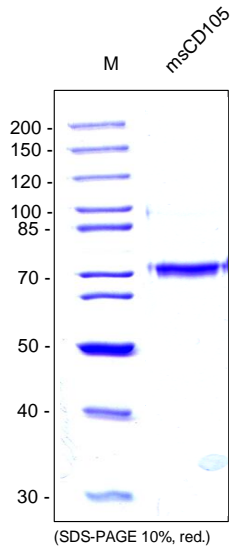


Fig. 1: SDS-PAGE analysis of recombinant mouse soluble CD105 from insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie Blue.