

Recombinant Human SOS1 Protein, His-tagged

Cat. No. SOS1-13H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

The recombinant protein (amino acids 563-1049 of human SOS1) contains two domains, REM (Ras Exchanger Motif) and CDC25 (cell division cycle 25). CDC25 activates Ras and promotes nucleotide exchange on Ras proteins (2). The REM domain contains an activating allosteric site which binds Ras-GTP leading to additional stimulation of the CDC25 domain and potentiating the Ras-GTP exchange stimulated by SOS1.

The human SOS1 (Lys563-Thr1049) fragment with a polyhistidine tag at the C-terminus was expressed in E. coli.

Species Human

Source E.coli

ProteinLength 563-1049 a.a.

Description

This gene encodes a protein that is a guanine nucleotide exchange factor for RAS proteins, membrane proteins that bind guanine nucleotides and participate in signal transduction pathways. GTP binding activates and GTP hydrolysis inactivates RAS proteins. The product of this gene may regulate RAS proteins by facilitating the exchange of GTP for GDP. Mutations in this gene are associated with gingival fibromatosis 1 and Noonan syndrome type 4.

Molecular Mass ~58.3 kDa

AA Sequence MKEEQMRLPSADVRFAPDSEENIIFEENMQPKAGIPIKAGTVIKLIERLTYHMYAD

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PNFVRTFLTTRYRSFCKPQELLSLIERFEIPEPEPTADRIAIENGDQPLS AELKRFRKE
YIQPVQLRVLNVCRHWVEHHFYDFERDAYLLQRMEEFIGTVRGKAMKKWVESITKII
QRKKIARDNGPGHNITFQSSPPTVEWHISRPGHIETFDLLTLHP IEIARQLTLLESDLY
RAVQPSELVGSVWTKEDKEINSPNLLKMIRHTTNLTWFEK CIVETENLEERVAVVS
RIIEILQVFQELNNFNGVLEVVSAMNSSPVYRLDHTFEQIPSRQKKILEEAHELSEDHY
KKYLAKLRSINPPCVPFPGIYLTNILKTEEGNPEVLKRHGKELINFSKRRKVAEITGEIQ
QYQNQPYCLRVESDIKRFFENL NPMGNSMEKEFTDYLFNKSLEIEPRNPKPLPRFPK
KYSYPLKSPGVRPSNPRPGTLEHHHHHH*

Purity	> 90% by Coomassie staining
Applications	Study inhibitors of SOS1 GTP exchange activity Identification of SOS1 binding proteins Study of SOS1 GEF activity with different GTPases
Notes	This product is for laboratory research use only.
Storage	Storage is recommended at -20 centigrade for longer periods of time.
Concentration	1.0-2.0 mg/mL by A280
Storage Buffer	20 mM HEPES, pH 7.5, 100 mM NaCl, 1 mM 2-mercaptoethanol, 20% Glycerol.
Shipping	Product requires shipping on ice packs.

GENE INFORMATION

Gene Name	SOS1 SOS Ras/Rac guanine nucleotide exchange factor 1 [Homo sapiens (human)]
Official Symbol	SOS1

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Synonyms	SOS1; SOS Ras/Rac guanine nucleotide exchange factor 1; GF1; HGF; NS4; GGF1; GINGF; SOS-1; son of sevenless homolog 1; gingival fibromatosis, hereditary, 1; guanine nucleotide exchange factor
Gene ID	6654
mRNA Refseq	NM_005633
Protein Refseq	NP_005624
MIM	182530
UniProt ID	Q07889

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