

## Active Recombinant Human SEMA3A protein, His-tagged

Cat. No. SEMA3A-1902H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Active Recombinant Human SEMA3A protein(Q14563)(580-664 aa), fused with N-terminal His tag, was expressed in E.coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	580-664 aa
<b>Form</b>	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
<b>Bio-activity</b>	Semaphorin 3A (SEMA3A) is a member of the semaphorin family. Semaphorin 3A is secreted by neurons and surrounding tissue to guide migrating cells and axons in the developing nervous system. This secreted Sema3A protein can function as either a chemorepulsive agent, inhibiting axonal outgrowth, or as a chemoattractive agent, stimulating the growth of apical dendrites. In both cases, the protein is vital for normal neuronal pattern development. Besides, Neuropilin 1 (NRP1) has been identified as an interactor of SEMA3A, thus a binding ELISA assay was conducted to detect the interaction of recombinant human SEMA3A and recombinant human NRP1. Briefly, SEMA3A were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to NRP1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-SEMA3A pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary

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antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µ stop solution to the wells and read at 450nm immediately. The binding activity of SEMA3A and NRP1 was shown, and this effect was in a dose dependent manner.

<b>Molecular Mass</b>	13.8kDa
<b>Endotoxin</b>	<1.0EU per 1µg (determined by the LAL method).
<b>Purity</b>	> 90%
<b>Storage</b>	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
<b>Reconstitution</b>	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## GENE INFORMATION

<b>Gene Name</b>	SEMA3A sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A [ Homo sapiens ]
<b>Official Symbol</b>	SEMA3A
<b>Synonyms</b>	SEMA3A; sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A; SEMAD; semaphorin-3A; coll 1; Hsema I; sema III; SEMA1; SemD; collapsin 1; semaphorin D; semaphorin L; semaphorin III; SEMAL; coll-1; Hsema-I; SEMAIII; Hsema-III; MGC133243;
<b>Gene ID</b>	10371

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mRNA Refseq	NM_006080
Protein Refseq	NP_006071
MIM	603961
UniProt ID	Q14563

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