

Active Recombinant Human SEMA3A protein, His-tagged

Cat. No. SEMA3A-1901H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human SEMA3A protein(Q14563)(31-141 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	31-141 aa
Form	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Bio-activity	The Semaphorin 3A (SEMA3A) which belongs to the semaphorin family 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. Semaphorin 3A is secreted protein containing a Sema domain, an immunoglobulin C2-like domain and a basic domain near the carboxyl tail. It can be secreted by neurons and surrounding tissue to guide migrating cells and axons in the developing nervous system. 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

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and incubated for 1h with anti-SEMA3A pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary 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.

Molecular Mass	16.6kDa
Purity	> 90%
Storage	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.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	SEMA3A sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A [Homo sapiens]
Official Symbol	SEMA3A
Synonyms	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;
Gene ID	10371

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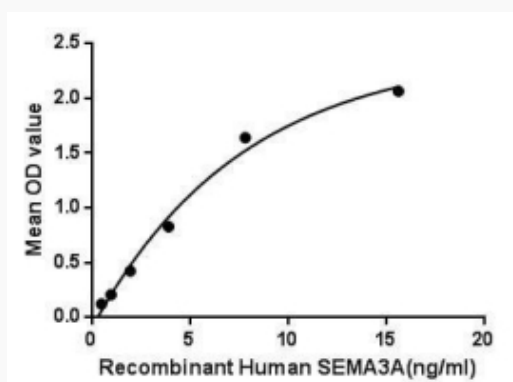
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Protein Refseq NP_006071

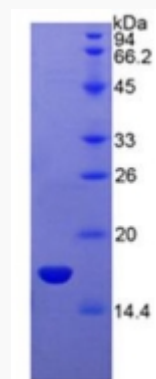
MIM 603961

UniProt ID Q14563

Activity



SDS-PAGE



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