

Active Recombinant Rat Sema3a protein, His-tagged

Cat. No. Sema3a-1132R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Rat Sema3a protein(Q63548)(31-150 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Rat
Source	E.coli
ProteinLength	31-150 aa
Form	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 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 functional binding ELISA assay was conducted to detect the interaction of recombinant rat SEMA3A and recombinant human NRP1. Briefly, SEMA3A were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul 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

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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 50 ul stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant rat SEMA3A and recombinant human NRP1 was shown, the EC50 for this effect is 1.22 ug/mL.

Molecular Mass	17.6kDa
Endotoxin	<1.0EU per 1µg (determined by the LAL method).
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 10mM PBS (pH7.4) 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 [<i>Rattus norvegicus</i>]
Official Symbol	Sema3a
Synonyms	SEMA3A; sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A; semaphorin-3A; sema III; Semaphorin 3a; semaphorin III; sema domain, immunoglobulin domain (Ig), short basic domain, sec;
Gene ID	29751

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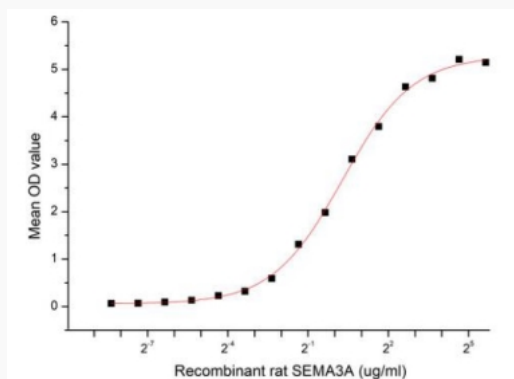
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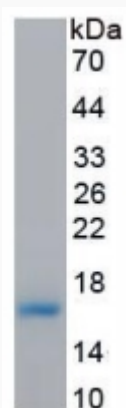
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Protein Refseq NP_059006

Activity



SDS-PAGE



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