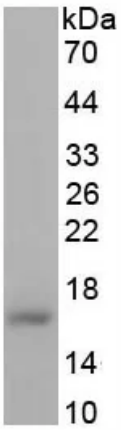
Active Semaphorin 3A (SEMA3A)

Catalog#:PER12997

概述（Summary）

别称（Alternative Names）	SEMAL; Hsema-I; Hsema-III; SEMA1; SEMAD; SEMAIII; SemD; Coll-1; Sema Domain,Immunoglobulin Domain(Ig),Transmembrane Domain(TM)and Short Cytoplasmic Domain 3A
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Arg31-Pro150】
Accession #	Q63548
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	17.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	May be involved in guiding growing axons towards their targets by forming a molecular boundary that instructs axons to engage in the formation of specific nerve tracts. Binds to neuropilin. Involved in the development of the olfactory system and in neuronal control of puberty.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

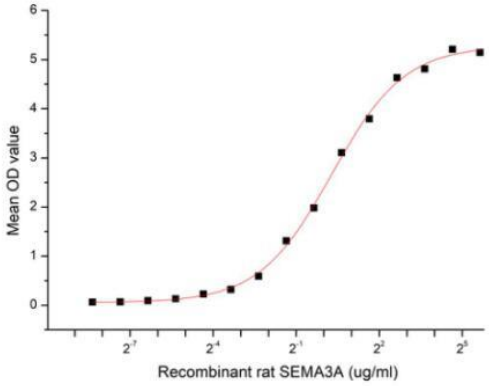


Figure 1. The binding activity of recombinant rat SEMA3A and recombinant human NRP1

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℃. 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 antibody, wells were aspirated and washed 3 times. With the addition of substrate solution , wells were incubated 15-25 minutes at 37℃. 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 in Figure 1, the EC50 for this effect is 1.22 ug/mL.

注意事项（Note）

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