

Human Semaphorin 3A protein, His tag

Cat. No. GTX00178-pro

Applications Functional Assay**Species** Human**Package**

10 µg

Applications

Application Note

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 100 µl 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 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 µl stop solution to the wells and read at 450nm immediately. The binding activity of SEMA3A and NRP1 was in a dose dependent manner.

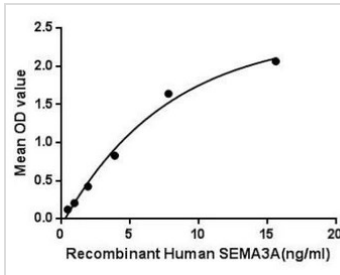
Observed MW (kDa) 16 kDa.

Properties

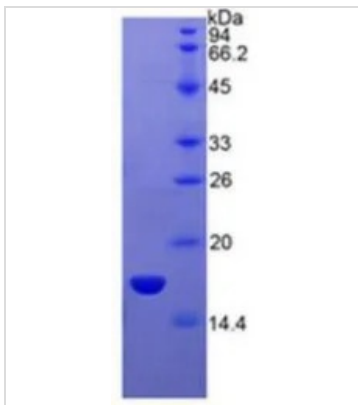
Form Lyophilized powder**Buffer** Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.**Preservative** ProClin 300**Storage** For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.**Region/Sequence** N-terminal His-Tag; Arg31~Cys141 (NP_006071.1)**Expression System** E. coli**Purity** > 90%**Endotoxin** < 1 EU/µg**Conjugation** Unconjugated**Note** For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

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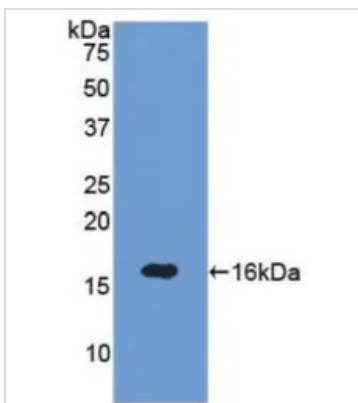
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DATA IMAGES

GTx00178-pro Functional Assay Image

Functional ELISA analysis of GTx00178-pro Human Semaphorin 3A protein which can bind immobilized NRP1 protein.


GTx00178-pro Image

SDS-PAGE analysis of GTx00178-pro Human Semaphorin 3A protein.


GTx00178-pro Image

WB analysis of GTx00178-pro Human Semaphorin 3A protein.



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