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Product Datasheet

Human Semaphorin 3A protein, His tag, Unconjugated GTX00178-PRO

Article Name	Human Semaphorin 3A protein, His tag, Unconjugated
Biozol Catalog Number	GTX00178-PRO
Supplier Catalog Number	GTX00178-pro
Alternative Catalog Number	GTX00178-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	10371
UniProt	Q14563
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, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Arg31~Cys141 (NP_006071.1)

Application Notes

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 37C. 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 37C. 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.