Recombinant Human Slit2 (aa1122-1529)

Catalog Number: 9379-SL

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Thr1122-Ser1529, with a C-terminal 6-His tag Accession # O94813-1
N-terminal Sequence Analysis	Thr1122
Predicted Molecular Mass	45 kDa

SPECIFICATIONS

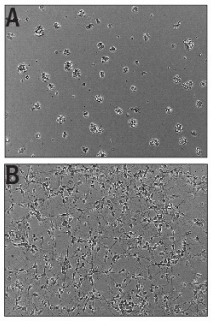
SDS-PAGE	53-64 kDa, reducing conditions
Activity	Measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons. Recombinant Human Slit2, immobilized at 625 ng/ml on a 96-well plate, is able to significantly enhance neurite outgrowth.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in MOPS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human Slit2 (Catalog # 9379-SL) Induces Cortical Neurite Outgrowth. A) Untreated E16-E18 embryonic rat cortical neurons. B) Neurite outgrowth in E16-E18 embryonic rat cortical neurons treated with 625 ng/mL of Recombinant Human Slit2.

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BACKGROUND

Slit Homolog 2 (Slit2) is a member of the Slit family of secreted extracellular matrix glycoproteins that are best known for their role in axon guidance (1). It is widely expressed in the developing and adult brain and spinal cord, as well as in fetal lung and kidney, and the adult adrenal gland, thyroid gland, and trachea (1-3). Slit2 is composed of multiple domains including seven EGF-like domains, twenty Leucine-rich repeats (LRRs), one Laminin G-like domain, one C-terminal cysteine knot-like (CTCK) domain, and four N-terminal and four C-terminal LRR domains (1, 3). Slit2 has a molecular weight of approximately 200 kDa (4). However, proteolytic cleavage between the fifth and sixth EGF-like domains produces a membrane-bound 140 kDa N-terminal protein, termed Slit2-N, and a 55-60 kDa C-terminal fragment, termed Slit2-C (4, 5). Mature human Slit2 shares 96% amino acid sequence identity with the mouse and rat orthologs. Slit2 has been shown to have various important functions in the nervous system. Slit2 induces growth cone collapse, inhibits oligodendrocyte precursor cell migration, and promotes axon elongation, branch formation, and fasciculation (5-9). Slit2 C-terminal fragment can mediate axon guidance through binding to Plexin A1 receptor (10). Slit2-C has also been shown to bind to Glypican-1 and promote motor axon migration (5). Outside the nervous system, C-terminal fragment of Slit2 activates a thermogenic PKA pathway in adipocytes and improves glucose homeostasis (11).

References:

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