Recombinant Human SorLA His-tag

Catalog Number: 11083-LA

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human SorLA protein Ser82-Asp2135, with a C-terminal 6-His tag Accession # NP_003096.1
N-terminal Sequence Analysis	Ser82
Predicted Molecular Mass	232 kDa

SPECIFICATIONS

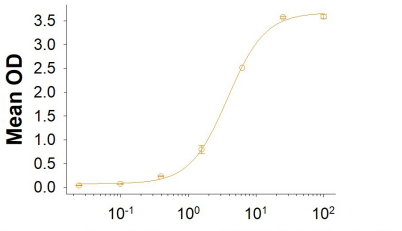
SDS-PAGE	270-345 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human SorLA His-tag Protein is coated at 0.250 µg/mL (100 µL/well), it binds to Recombinant Human PDGF-BB (Catalog # 220-BB). The ED_{50} for this binding is 2.00-30.0 ng/mL.
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 PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1.00 mg/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.

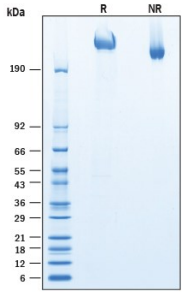
DATA

Binding Activity



Recombinant Human SorLA His-tag Protein Binding Activity. When Recombinant Human SorLA His-tag Protein (Catalog # 11083-LA) is coated at 0.250 µg/mL (100 µL/well), it binds to Recombinant Human PDGF-BB (Catalog # 220-BB). The ED_{50} for this binding is 2.00-30.0 ng/mL.

SDS-PAGE



Recombinant Human SorLA His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human SorLA His-tag Protein (Catalog # 11083-LA) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 270-345 kDa.

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BACKGROUND

SorLA (sortilin-related receptor, LDLR class A repeats-containing), also called LR11 or SORL1, is a 250 kDa type I transmembrane glycoprotein of the Sortilin family of Vps10p-domain receptors (1, 2). SorLA is found in both intracellular and surface membranes in the central nervous system, and mediates trafficking of proteins such as the amyloid precursor protein (APP) (3-5). The 2214 amino acid (aa) human SorLA precursor includes a 28 aa signal sequence and a 53 aa furin-cleaved propeptide. The mature SorLA contains a vacuolar protein sorting 10 protein (Vps10p) homology domain, β-propeller and epidermal growth factor (EGF) domains, a cluster of 11 complement-type repeat domains, six fibronectin type III repeats, a single transmembrane domain (TM), and a cytoplasmic domain (CT) (1, 6-7). Human SorLA shares 93% and 92% aa sequence identity with mouse and rat SorLA, respectively. SorLA is mainly expressed in nervous system, but is also found in non-neuronal tissues (8). Upon truncation, SorLA is able to bind multiple ligands among which are RAP, apolipoprotein E, and lipoprotein lipase, and facilitate both their endocytosis and sorting (1). The expression, translocation, and ectodomain shedding were shown to be induced by its ligand head activator peptide (HA) (9). SorLA has also been shown to be important in Alzheimer's disease through multiple functions, but especially through its ability to bind Amyloid Precursor Protein (4). It is involved in TrkB receptor and GFRa1 trafficking and further enhancement of BDNF and GDNF functions respectively (10, 11).

References:

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