

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
His22-Arg402, with a C-terminal Asp and 10-His tag
Accession # Q9R0M4

N-terminal Sequence Analysis His22

Predicted Molecular Mass 41 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 110-170 kDa, reducing conditions

Activity Measured by the ability of the immobilized protein to inhibit the adhesion of CHO Chinese hamster ovary cells transfected with P-Selectin. The ED₅₀ for this effect is typically 0.07-0.35 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE with silver staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

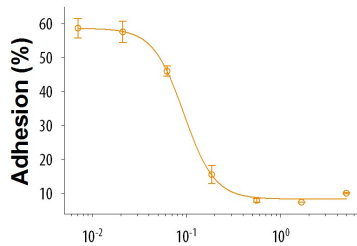
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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 Mouse Podocalyxin (Catalog # 1556-PD) inhibits the adhesion of P-Selectin transfected CHO Chinese hamster ovary cells. The ED₅₀ for this effect is 0.07-0.35 µg/mL.

Recombinant Mouse Podocalyxin (µg/mL)

BACKGROUND

Podocalyxin (PODXL), also known as Podocalyxin-like protein 1 (PCLP-1), is a heavily glycosylated transmembrane sialoprotein in the CD34 and Endoglycan family (1). Mature mouse Podocalyxin consists of a 383 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 78 aa cytoplasmic domain (2). Within the ECD, mouse Podocalyxin shares 31% and 55% aa sequence identity with human and rat Podocalyxin, respectively. Alternative splicing of mouse Podocalyxin generates an additional isoform with a truncated intracellular region (2). Podocalyxin is expressed on glomerular and vascular endothelial cells (3, 4), neurons (5), hematopoietic, mesenchymal, and cardiac stem cells (6-9), and metastatic carcinoma and glioblastoma tumor cells (10-12). A soluble form of Podocalyxin can be released into the urine of women with pre-eclampsia (13). Podocalyxin promotes platelet activation (14), neurite outgrowth, branching, and synaptogenesis (5), homing of hematopoietic progenitor cells to the bone marrow and spleen (7), and engraftment of mesenchymal and cardiac stem cells into ischemic heart and kidney (8, 9). Its interactions with L-Selectin and E-Selectin mediate the tethering of lymphocytes and metastatic tumor cells to the vascular endothelium (4, 10, 11). Podocalyxin can be expressed as a 160-165 kDa molecule or as even larger glycoforms (3, 4, 11, 15). In humans, an approximately 200 kDa glycoform contains the carbohydrate antigen recognized by TRA-1-60 and TRA-1-81 antibodies used for the identification of undifferentiated pluripotent embryonic stem cells (15).

References:

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