

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Ser23-Arg427 and a C-terminal Asp and 10-His tag
Accession # AAB61574.1

N-terminal Sequence Analysis Ser23

Structure / Form Monomer

Predicted Molecular Mass 43 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 125-165 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 0.08-0.4 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

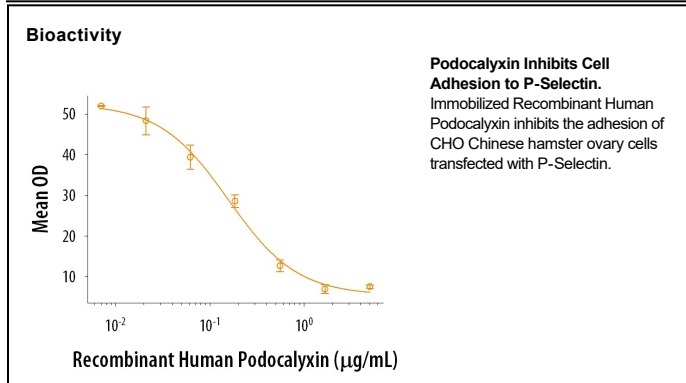
Reconstitution Reconstitute at 100 µg/mL in PBS.

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



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 human Podocalyxin consists of a 406 amino acid (aa) extracellular domain (ECD), a 26 aa transmembrane segment, and a 75 aa cytoplasmic domain (2). Within the ECD, human Podocalyxin shares 31% aa sequence identity with mouse and rat Podocalyxin. Alternative splicing of human Podocalyxin generates an additional isoform with a 33 aa deletion in the ECD. Podocalyxin is expressed on glomerular and vascular endothelial cells (2, 3), neurons (4), hematopoietic, mesenchymal, and cardiac stem cells (5-8), and metastatic carcinoma and glioblastoma tumor cells (9-11). A soluble form of Podocalyxin can be released into the urine of women with pre-eclampsia (12). Podocalyxin promotes platelet activation (13), neurite outgrowth, branching, and synaptogenesis (4), homing of hematopoietic progenitor cells to the bone marrow and spleen (6), and engraftment of mesenchymal and cardiac stem cells into ischemic heart and kidney (7, 8). Its interactions with L-Selectin and E-Selectin mediate the tethering of lymphocytes and metastatic tumor cells to the vascular endothelium (3, 9, 10). Podocalyxin can be expressed as a 160-165 kDa molecule or as even larger glycoforms (2, 3, 10, 14). 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 (14).

References:

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