

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Ser18-Ser210, with a C-terminal 10-His tag
Accession # Q9UNN8

N-terminal Sequence Analysis Ser18

Predicted Molecular Mass 23 kDa

SPECIFICATIONS

SDS-PAGE 36-45 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When human Activated Protein C (APC) is immobilized at 3 µg/mL, 100 µL/well, Recombinant Human EPCR binds with an ED₅₀ of 1-5 µg/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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

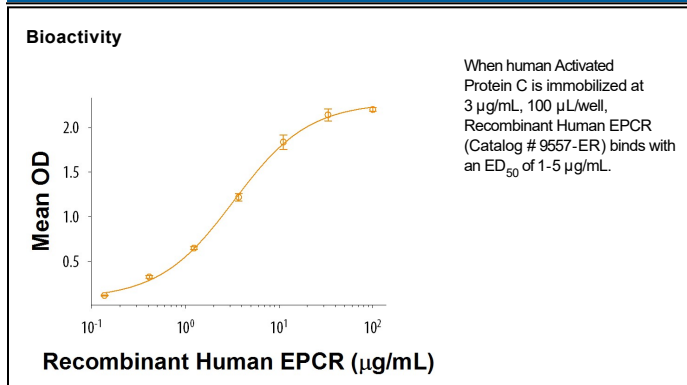
Reconstitution Reconstitute at 500 µg/mL in PBS.

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



BACKGROUND

The endothelial protein C receptor (EPCR), also known as CD201, is a transmembrane glycoprotein expressed on vascular endothelial cells and functions as a negative regulator of thrombosis (1). Mature human EPCR consists of a 193 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 7 aa cytoplasmic tail (2). Within the ECD, human EPCR shares 63% and 66% aa sequence identity with mouse and rat EPCR, respectively. EPCR inhibits thrombosis through its interactions with Protein C, activated Protein C (APC), and Coagulation Factors VII, and VIIa (3, 4). It enhances the activation of Protein C in response to complexes of Thrombin-Thrombomodulin (5). In humans, a soluble form of EPCR can be produced by alternative splicing or ADAM17/TACE mediated shedding (6-9), and this protein inhibits the anti-coagulant activity of APC (10, 11). EPCR can be degraded on the surface of endothelial cells by Neutrophil Elastase (12). Activation of EPCR also protects vascular endothelial cells from Thrombin-induced apoptosis (13). EPCR binds to CD11b/CD18 (Mac-1) on monocytes and mediates monocyte adhesion to the vascular endothelium (14). In addition, EPCR binds to the antigen receptor on $\gamma \delta$ T cells (15), promotes hematopoietic stem cell retention in the bone marrow (9), and binds to surface proteins of some species of Plasmodium, contributing to pathogenicity in severe malaria (16).

References:

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