Recombinant Protein Technical Manual

Recombinant Mouse SDPR Protein (aa 280, His Tag)

RPES0857

Product Data:

Product SKU: RPES0857

Size: 20µg

Species: Mouse

Expression host: E. coli

Uniprot: NP_620080.1

Protein Information:

Molecular Mass: 21 kDa

AP Molecular Mass: 28 kDa

Tag: N-His

Bio-activity:

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: Please contact us for more information.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4, 30% glycerol

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: SDPR

Immunogen Information:

Sequence: Gly 2-Ala 180

Background:

Serum deprivation-response protein, also known as Phosphatidylserine-binding protein, Cavin-2 and SDPR, is a member of the PTRF / SDPR family. SDPR is highly expressed in heart and lung, and expressed at lower levels in brain, kidney, liver, pancreas, placenta, and skeletal muscle. SDPR is a new regulator of caveolae biogenesis. SDPR is up-regulated in asyncronously growing fibroblasts following serum deprivation but not following contact inhibition and Down-regulated during synchronous cell cycle re-entry. Caveolae are plasma membrane invaginations with a characteristic flask-shaped morphology. They function in diverse cellular processes, including endocytosis. Loss of SDPR causes loss of caveolae. SDPR binds directly to PTRF and recruits PTRF to caveolar membranes. Overexpression of SDPR, unlike PTRF, induces deformation of caveolae and extensive tubulation of the plasma membrane. SDPR overexpression results in increased caveolae size and leads to the formation of caveolae-derived tubules containing Shiga toxin. SDPR is a membrane curvature inducing component of caveolae, and that STB-induced membrane tubulation is facilitated by caveolae. Pleckstrin and SDPR are phosphorylated by protein kinase C (PKC), the interaction between pleckstrin and SDPR was shown to be independent of PKC inhibition or activation. SDPR may facilitate the translocation of nonphosphorylated pleckstrin to the plasma membrane in conjunction with phosphoinositides that bind to the C-terminal PH domain.