Recombinant Mouse Angiogenin Protein(Trx Tag)

Catalog Number: PDEM100120

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

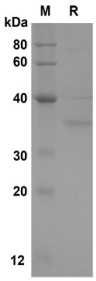
Description

Species	Mouse
Source	E.coli-derived Mouse Angiogenin protein Gln25-Leu145,with an N-terminal Trx
Calculated MW	33.3 kDa
Observed MW	36 kDa
Accession	P21570
Bio-activity	Not validated for activity

Properties

Purity	> 85% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. 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 a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Mouse Angiogenin proteins, 2μg/lane of Recombinant Mouse Angiogenin proteins was resolved with SDS-PAGE under reducing conditions,, showing bands at 36 kDa

Background

Angiogenin is a protein crucial in angiogenesis, and it is overexpressed in many cancers and downregulated in neurodegenerative diseases, respectively. The protein interaction with actin, through the loop encompassing the 60-68 residues, is an essential step in the cellular cytoskeleton reorganization. This, in turn, influences the cell proliferation and migration processes. Angiogenin (ANG) is a secretory ribonuclease that promotes the proliferation of endothelial cells, leading to angiogenesis. This function relies on its ribonucleolytic activity, which is low for simple RNA substrates. Upon entry into the cytosol, ANG is sequestered by the ribonuclease inhibitor protein (RNH1). ANG is a potent cytotoxin for RNH1-knockout HeLa cells, belying its inefficiency as a nonspecific catalyst. The toxicity does, however, rely on the ribonucleolytic activity of ANG and a cytosolic localization, which lead to the accumulation of particular tRNA fragments (tRFs), such as tRF-5 Gly-GCC. These up-regulated tRFs are highly cytotoxic at physiological concentrations. Although ANG is well-known for its promotion of cell growth. Angiogenin and osteoprotegerin are triceps specific myokines with beta-cell protective actions against proinflammatory cytokines. Angiogenin and EPCs are modulated by rehabilitation after cerebral ischemia, suggesting that both angiogenin and EPCs could serve as biomarkers of improvement during rehabilitation or future therapeutic targets.

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