

For Research Use Only

Recombinant Human PDI protein (rFc Tag)



Catalog Number: Eg3053

Basic Information

Species:
Human

Purity:
>90 %, SDS-PAGE

Tag:
rFc Tag

Technical Specifications

Purity:

>90 %, SDS-PAGE

Endotoxin Level:

<0.1 EU/ μ g protein, LAL method

Source:

HEK293-derived Human PDI protein Asp18-Leu508 (Accession# P07237) with a rabbit IgG Fc tag at the C-terminus.

GeneID:

5034

Accession:

P07237

Predicted Molecular Mass:

81.3 kDa

SDS-PAGE:

80-90 kDa, reducing (R) conditions

Formulation:

Lyophilized from 0.22 μ m filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

Storage:

It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

Shipping:

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

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

P4HB (Prolyl 4-hydroxylase subunit beta) belongs to the disulfide bond isomerase family and is a highly abundant multifunctional enzyme responsible for hydroxylating prolyl residues in procollagen. It can catalyze the formation, breakage and rearrangement of disulfide bonds through two thioredoxin structural domains, which are important for maintaining the oxidative environment in the endoplasmic reticulum. P4HB dysregulation has been reported in neoplasms, diabetes mellitus, neurodegenerative diseases and cardiovascular disorders and its up-regulation in most of the tumors correlates with a poor prognosis, thus P4HB may serve as a potent target for a variety of cancers. (PMID: 38029391) P4HB serves as a novel target for UFMylation, and its UFMylation deficiency promotes P4HB protein degradation via the ubiquitin-proteasome pathway, which leads to impairment of mitochondrial function and exacerbates oxidative stress and ERS; Therefore, P4HB UFMylation may be a therapeutic target for liver mitochondrial function-related diseases. (PMID: 35753586)

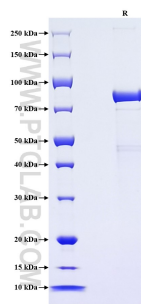
References

1. Feng D, et al. Aging Dis. 2023;15(6):2369-2380.
2. Gao X, et al. J Extracell Vesicles. 2021;10(5):e12060.
3. Zhu J, et al. Free Radic Biol Med. 2022;188:277-286.
4. Wu Y, et al. Oncol Lett. 2021;21(2):95.

Synonyms

P4HB, PDI, Cellular thyroid hormone-binding protein, CLCRP1, DSI

Selected Validation Data



Purity of Recombinant Human PDI was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) conditions and stained using Coomassie blue.

For technical support and original validation data for this product please contact

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