Human PARK7 / DJ-1 Protein (His Tag)

Catalog Number: **12484-H08E**

General Information

Gene Name Synonym:

DJ-1; DJ1; HEL-S-67p

Protein Construction:

A DNA sequence encoding the human PARK7 (Q99497-1) (Met 1-Asp 189) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant human PARK7 consisting of 199 amino acids and has a calculated molecular mass of 21.3 kDa. It migrates as an approximately 25 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 150mM NaCl, 3mM DTT, 5% glycerol, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

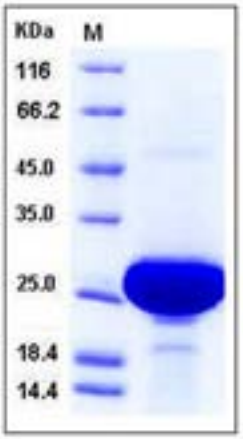
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Parkinson's disease locus DJ-1 (PARK7) is a differentially expressed transcript. DJ-1 plays a physiologic role in protection of erythroid cells from oxidant damage, a function unmasked in the context of oxidative stress. PARK7 belongs to the peptidase C56 family of proteins. It acts as a positive regulator of androgen receptor-dependent transcription. It may also function as a redox-sensitive chaperone, as a sensor for oxidative stress, and it apparently protects neurons against oxidative stress and cell death. Mutations in the DJ-1 gene are associated with rare forms of autosomal recessive early-onset Parkinson's disease (PD). DJ-1/p53 interactions contribute to apoptosis resistance in clonal myeloid cells and may serve as a prognostic marker in patients with myelodysplastic syndromes (MDS). DJ-1 regulates redox signaling kinase pathways and acts as a transcriptional regulator of antioxidative gene batteries. Therefore, DJ-1 is an important redox-reactive signaling intermediate controlling oxidative stress after ischemia, upon neuroinflammation, and during age-related neurodegenerative processes. Augmenting DJ-1 activity might provide novel approaches to treating chronic neurodegenerative illnesses such as Parkinson's disease and acute damage such as stroke.

References

1.Takahashi K, *et al.* (2001). DJ-1 positively regulates the androgen receptor by impairing the binding of PIASx alpha to the receptor. J. Biol. Chem. (United States). 276 (40): 37556-63. 2.Niki, Takeshi, *et al.* (2003). DJBP: a novel DJ-1-binding protein, negatively regulates the androgen receptor by recruiting histone deacetylase complex, and DJ-1 antagonizes this inhibition by abrogation of this complex. Mol. Cancer Res. (United States). 1 (4): 247-61. 3.Kahle PJ, *et al.* (2009) DJ-1 and prevention of oxidative stress in Parkinson's disease and other age-related disorders. Free Radic Biol Med. 47(10): 1354-61.