



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human DNAL4 Protein
Catalog Number: hRP-0790
Manufacturer: LD Biopharma, Inc.

Introduction

Dynein is a motor protein (also called molecular motor or motor molecule) in cells, which converts the chemical energy contained in ATP into the mechanical energy of movement. Dynein transports various cellular cargo by "walking" along cytoskeletal microtubules towards the minus-end of the microtubule, which is usually oriented towards the cell center. Thus, they are called "minus-end directed motors," while kinesins, motor proteins that move toward the microtubules' plus end, are called plus-end directed motors. Human dynein light chain 4, axonemal (DNAL4) is a component of the dynein motor complex which involved in generating protein of respiratory cilia. Produces force towards the minus ends of microtubules. Dynein has ATPase activity.

Full-length recombinant human DNAL4 (463aa) gene was constructed with 15aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol: DNAL4 (PIG27)
Accession Number: NP_001069
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Yano,H., et al., *Association of Trk neurotrophin receptors with components of the*



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cytoplasmic dynein motor. J. Neurosci. 21 (3), RC125 (2001)

Iwasaki, M., et al., *Identification of cooperative genes for NUP98-HOXA9 in myeloid leukemogenesis using a mouse model*. Blood 105 (2), 784-793 (2005)

Applications

1. May be used for in vitro DNAL4 related cellular cargo movement regulation study coating with intracellular protein delivery of this protein.
2. May be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping DNAL4 protein-protein interaction..
4. As antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Suggested Coating Protocol

Standard coating was performed using 1ml PBS / well, which contains 5-10 ug protein / well) for incubating at 4°C overnight. After coating, remove PBS solution, the plate is ready for cell culture study.

Recombinant Protein Sequence

MASMTGGQQMGRGEFMGETEGKKDEADYKRLQTFPLVRHSDMPEEMRVETMELCVTACEKFSNN
NESAAMIKETMDKKFGSSWHVVIGEGFGFEITHEVKNLLYLYFGGTLAVCVWKCS