DOCK4 Antibody / Cell Migration Protein Antibody (RQ7372)

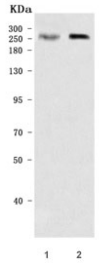
Catalog No.	Formulation	Size
RQ7372	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

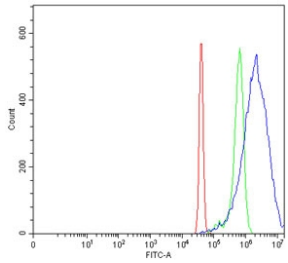
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q8N1I0
Localization	Cytoplasm, cell membrane
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This DOCK4 Antibody / Cell Migration Protein Antibody is available for research use only.



DOCK4 Antibody Human Skeletal Muscle IHC. Immunohistochemistry staining of FFPE human skeletal muscle using DOCK4 antibody demonstrates widespread cytoplasmic staining throughout skeletal muscle fibers, consistent with expression of Dedicator of Cytokinesis 4 (DOCK4). DOCK4 is a cell migration protein that regulates Rac-family GTPase signaling pathways involved in cytoskeletal organization, cellular adhesion, and maintenance of tissue architecture. The observed staining pattern within mature muscle fibers is consistent with the role of DOCK4 in coordinating cytoskeletal dynamics and cellular organization. These findings support the utility of DOCK4 antibody for studies of cell migration, cytoskeletal regulation, and tissue morphogenesis pathways. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



DOCK4 Antibody Human and Rat WB. Western blot analysis of human 293T and rat L6 cell lysates using DOCK4 antibody demonstrates a distinct immunoreactive band at approximately 225 kDa, consistent with the expected molecular weight of Dedicator of Cytokinesis 4 (DOCK4). DOCK4 is a cell migration protein that functions as a guanine nucleotide exchange factor regulating Rac-family GTPase signaling, cytoskeletal remodeling, and cell adhesion pathways. The observed expression in both human and rat samples supports the utility of this antibody for investigating cellular motility, tissue organization, cytoskeletal regulation, and developmental signaling mechanisms. Predicted molecular weight: ~225 kDa.



DOCK4 Antibody SiHa Flow Cytometry. Flow cytometric analysis of human SiHa cells using DOCK4 antibody demonstrates a clear rightward shift of the blue histogram (DOCK4 antibody) relative to the green histogram (isotype control) and red histogram (cells alone), consistent with expression of Dedicator of Cytokinesis 4 (DOCK4). DOCK4 is a cell migration protein that regulates Rac-family GTPase signaling pathways involved in cytoskeletal organization, cell adhesion, and directed cellular movement. The observed staining pattern supports detection of endogenous DOCK4 expression and demonstrates the utility of this antibody for studies of cellular motility, cytoskeletal regulation, tissue morphogenesis, and signaling pathways governing cell-cell interactions. Cells were stained with 1 ug antibody per million cells following blocking with goat sera.

Description

DOCK4 Antibody / Cell Migration Protein Antibody is designed for the detection and study of DOCK4 (Dedicator of Cytokinesis 4), a member of the DOCK family of guanine nucleotide exchange factors that regulate small Rho GTPase signaling pathways. DOCK4 functions primarily through activation of Rac-family GTPases, helping coordinate cellular movement, cytoskeletal remodeling, and cell-cell interactions. Through these activities, DOCK4 plays an important role in tissue organization, developmental patterning, and maintenance of normal cellular architecture.

As a cell migration protein, DOCK4 regulates actin cytoskeletal dynamics that govern cell shape, polarity, adhesion, and directional movement. The protein serves as a molecular link between extracellular signals and intracellular pathways controlling cellular motility. By modulating Rac-dependent signaling networks, DOCK4 helps coordinate the structural changes required for migration, tissue remodeling, and cellular communication. These functions are essential for normal development as well as maintenance of tissue integrity throughout life.

DOCK4 has been implicated in a variety of biologic processes involving coordinated cell movement and tissue morphogenesis. Investigators have examined its role in embryonic development, neuronal organization, epithelial integrity, wound repair, and cellular differentiation. Because migration and adhesion are fundamental cellular properties, DOCK4 continues to attract interest as a regulator of pathways that control how cells interact with their surrounding environment and neighboring cells.

Beyond developmental biology, DOCK4 has emerged as an important research target in studies of cancer progression, metastasis, and disease-associated alterations in cell behavior. Changes in DOCK4 expression or signaling activity can influence migratory capacity, adhesion properties, and cytoskeletal organization. Consequently, DOCK4 is frequently investigated in research examining mechanisms of tumor invasion, tissue remodeling, and dysregulated cellular movement. The protein's role at the intersection of signaling, adhesion, and cytoskeletal control has established it as a valuable marker for understanding cellular dynamics in both normal and pathologic contexts.

As a cell migration protein, DOCK4 also contributes to broader signaling networks that regulate tissue architecture and developmental processes. Through its interactions with Rac signaling pathways and cytoskeletal regulatory proteins, DOCK4 helps coordinate cellular responses to environmental cues and developmental signals. These functions support proper tissue formation, maintenance of cellular organization, and adaptation to changing physiologic conditions.

DOCK4 Antibody is useful for investigating cell migration, Rac signaling, cytoskeletal regulation, cell adhesion, and developmental biology pathways. Researchers utilize DOCK4 Antibody reagents to evaluate protein expression patterns and study molecular mechanisms governing cellular motility, tissue morphogenesis, signaling pathway regulation, and maintenance of normal cellular architecture.

Explore additional antibodies to cell migration proteins, cytoskeletal regulators, and cell adhesion markers on our Cell Biology Antibodies page.

Application Notes

Optimal dilution of the DOCK4 Antibody / Cell Migration Protein Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids K191-I1837) was used as the immunogen for the DOCK4 antibody.

Storage

After reconstitution, the DOCK4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

DOCK4 Antibody, Dedicator of Cytokinesis 4 Antibody, Cell Migration Protein Antibody, Rac Signaling Protein Antibody, Cytoskeletal Regulation Protein Antibody, Cell Adhesion Protein Antibody, Rho GEF Family Protein Antibody

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