# Daple, Gipie Antibody

Novel Girdin family molecules
Wnt signal, for research of reticulum stress

- Research Use Only -

## Antibodies

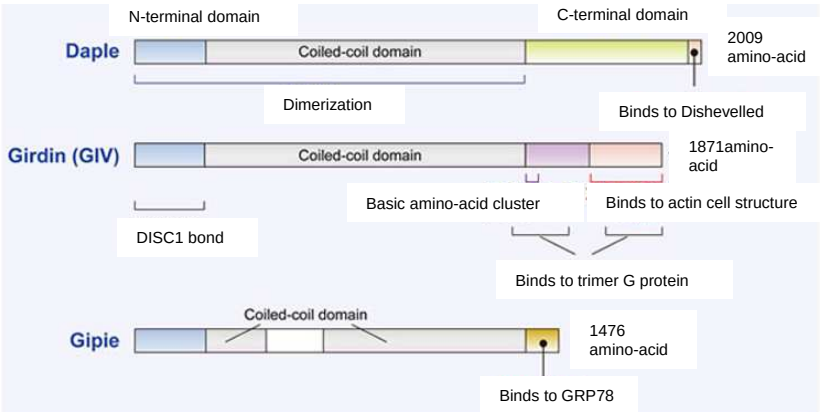
| Product No. | Species | Product Name | Application | Size | Small Size |
|---|---|---|---|---|---|
| 28147 | Human | Anti-Human Daple Rabbit IgG Affinity Purify | WB, IHC, ICC | 100μG | 10μG |
| 28149 | Human | Anti-Human Gipie Rabbit IgG Affinity Purify | WB, IP, IHC, ICC | 100μG | 10μG |

Application: **WB**: Western Blotting **IP**: Immunoprecipitation **IHC**: Immunohistochemistry **ICC**: Immunocytochemistry

### Girdin related proteins - Comparison of primary structure of Daple and Gipie

Daple consists of N-terminal domain, C-terminal domain and coiled-coil domain and binds to PDZ domain of Dvl via 3 amino-asid located at C-terminal.

Gipie also holds coiled-coil domain and binds to GRP78 at the area of C-terminal.

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## Daple ( Dishevelled-associating protein with a high frequency of leucine residues )

Classical (β-catenin dependent) and non-classical (β-catenin non-dependent) Wnt signal pathway are signal pathways that regulate forming and maintaining of embryonic growth or cell structures of organs and amplifying of cells. It is also involved in various diseases including cancers. Especially, it has been well known that the non-classical Wnt signal pathway regulates polarity determination of tissues and migration of cells.

Daple is a molecule that was identified by A. Kikuchi et al, Osaka University and it shows that it has a homological sequence with Girdin or Gipie. It is suggested that Daple binds to Dvl and controls activation of Rac depended on Wnt5a stimulus via its mutual interaction. It was discovered that Daple is essential for cell migration and restructuring of actin structure and its molecular mechanism has also an important role for healing of wound of skin by Daple knockout mouse analysis (Ref.1).

## Gipie

A novel Girdin family molecule, Gipie is expressed in endothelial cells and it is induced by ER stresses. It interacts with GRP78 that is a 78kDa, glucose regulatory protein. It has been reported that Gipie controls IRE1-JNK signal pathway by the interactive function and protects endothelial cells from apoptosis that is induced by ER stresses under circumstances such as atherosclerosis or vascular endothelial failure. (Ref.2).


References

1. The Dishevelled-associating protein Daple controls the non-canonical Wnt/Rac pathway and cell motility. Ishida-Takagishi M, Enomoto A, Asai N, Ushida K, Watanabe T, Hashimoto T, Kato T, Weng L, Matsumoto S, Asai M, Murakumo Y, Kaibuchi K, Kikuchi A, Takahashi M. Nat Commun. 2012 May 29;3:859.
2. Protective role of Gipie, a Girdin family protein, in endoplasmic reticulum stress responses in endothelial cells. Matsushita E, Asai N, Enomoto A, Kawamoto Y, Kato T, Mii S, Maeda K, Shibata R, Hattori S, Hagikura M, Takahashi K, Sokabe M, Murakumo Y, Murohara T, Takahashi M. Mol Biol Cell. 2011 Mar 15;22(6):736-47.


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