



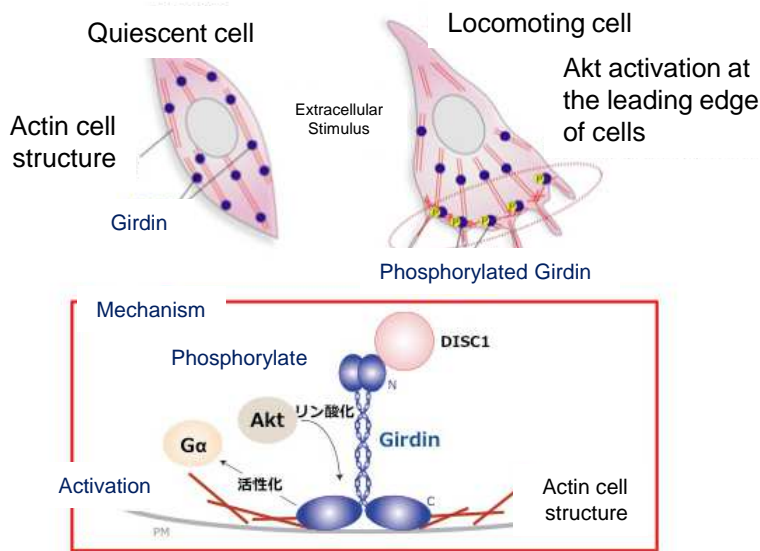
# Girdin Antibody

A new protein playing an important role in the infiltration and metastasis of cancer cells

- Research Use Only -

**Girdin** is a new protein playing an important role in the infiltration and metastasis of cancer cells. A new substance of Akt, Girdin (Girders of actin filament) was discovered by a research group led by Takahashi et al., Nagoya University by screening using yeast two-hybrid method and was elucidated that Girdin has an important role for cell migration downstream of Akt. (Enomoto et al., *Dev. Cell*, 2005).

## Regulatory model of cell migration regulated by Girdin



It has been proven that Girdin is a new actin binding protein and it restructures actin fibers upon it is phosphorylated by Akt and it involves in forming of lamellipodia that is located at the leading edge of cells and playing an important role for cell migration by functional analysis.

The current study conducted by using Girdin antibodies provided by IBL suggests that the change of condition of phosphorylated Girdin involves in structure alteration in relation to cell migration in vivo or in vitro (Omori et al. *BBRC*, 2015).

Provided by Prof. M. Takahashi, Department of Pathology, Nagoya University Graduate School of Medicine

Species: H: Human M: Mouse

Product No.	Species	Product Name	Application	Size	Small Size
18979	H	Anti-Human Girdin Rabbit IgG Affinity Purify	WB, IP, IHC, ICC	100μG	10μG
28067	H	Anti-Human Girdin (S1416 Phosphorylated) Rabbit IgG Affinity Purify	WB, IHC	100μG	10μG
28143	H/M	Human Girdin (Phospho-Y1798) Rabbit IgG A.P.	WB, IHC, ICC	50μG	5μG
28145	H	Anti-Human Girdin (Phospho-Y1764) Rabbit IgG A.P.	WB, ICC	50μG	5μG
28147	H	Anti- Human Daple Rabbit IgG Affinity Purify	WB, IHC, ICC	100μG	10μG
28149	H	Anti- Human Gipie Rabbit IgG Affinity Purify	WB, IP, IHC, ICC	100μG	10μG

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

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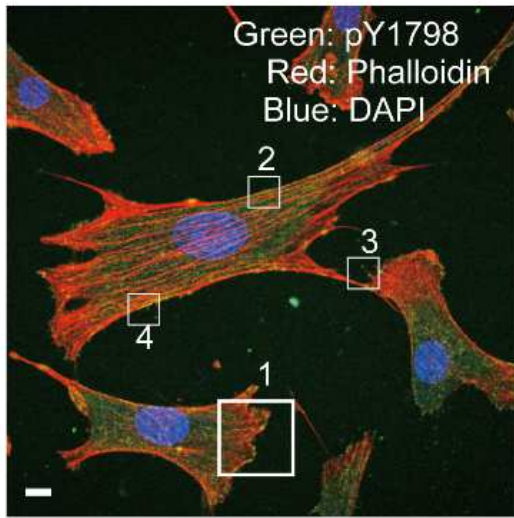


Immuno-Biological Laboratories, Inc.  
8201 Central Ave NE, Suite P  
Minneapolis, MN 55432

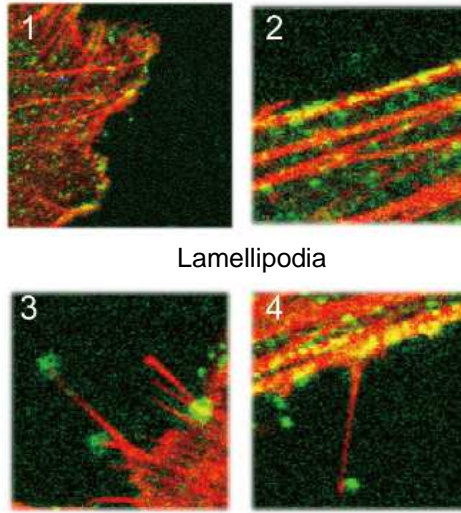
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# Phosphorylated Girdin Y 1798 involves in Migration.

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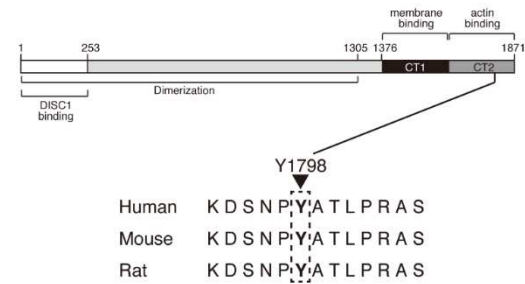


Green: pY1798  
Red: Phalloidin  
Blue: DAPI



Lamellipodia

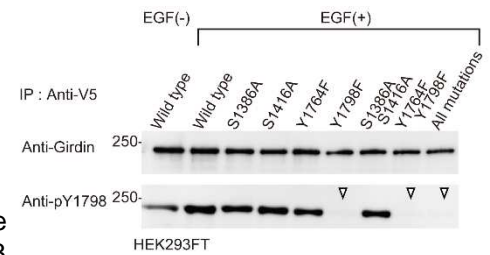
The leading edge of filopodia



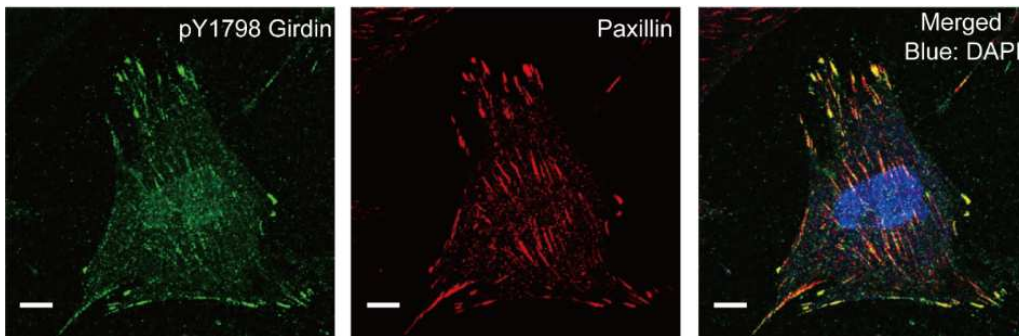
Antigenic site and domain structure of Girdin

## Distribution of phosphorylated Girdin in cultured NIH3T3 cells

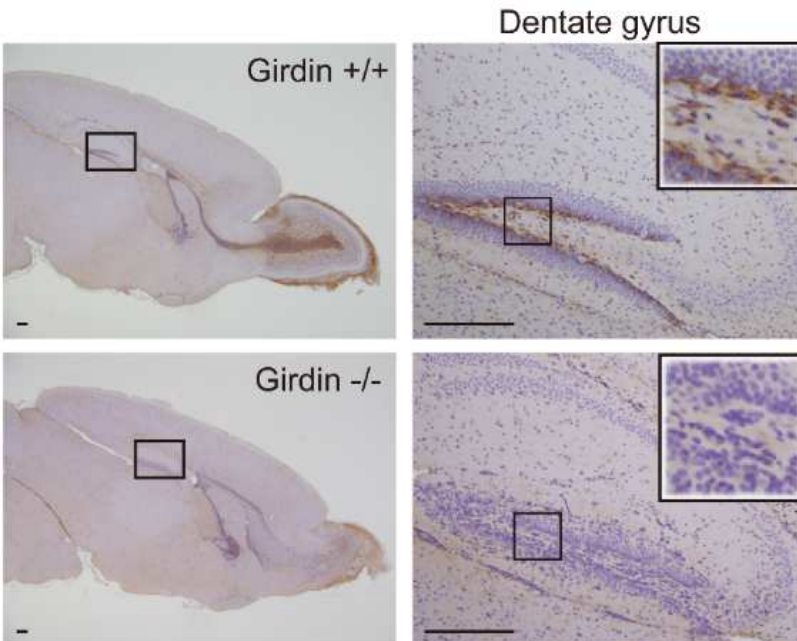
The cell was stained by phalloidin for visualizing of bundle of actin polymer. Point-like signal of pY1798 Girdin was colocalized with phalloidin positive stress fibers of NIH3T3 cells (2,4). The signal of pY1798 was recognized at lamellipodia (1) and the leading edge of filopodia (3,4).



Confirming the specificity of anti-phosphorylated Girdin antibody



pY1798 and Paxillin were colocalized in NIH3T3 cells.



Dentate gyrus

## Distribution of pY1798 Girdin in mouse brain

Paraffin-embedded mouse brain tissue (14 days after birth): Stained Girdin native mouse (Girdin +/+), Girdin LacZ mouse knock-in model (Girdin -/-) using pY1798 Girdin antibody. Coloring by DAB and Contrast staining by hematoxylin. Left hand-side figures are low power and right hand-side figures are enlarged the part of the boxes. Positive signal was recognized in the hilum-side of the granule cell layer.

**Reference:** Girdin is phosphorylated on tyrosine 1798 when associated with structures required for migration. Omori K, Asai M, Kuga D, Ushida K, Izuchi T, Mii S, Enomoto A, Asai N, Nagino M, Takahashi M. *Biochem Biophys Res Commun.* 2015 Mar 20;458(4):934-40.