

Anti-Talin (Rod domain) Antibody

Catalog # AN1985

Product Information

Application	WB, ICC, IP
Primary Accession	P54939
Reactivity	Rat
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG1
Clone Names	8D4
Calculated MW	271842

Additional Information

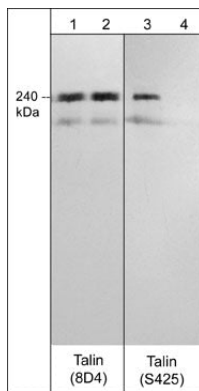
Gene ID	395194
Other Names	TLN1
Dilution	WB~~1:1000 ICC~~N/A IP~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Talin (Rod domain) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

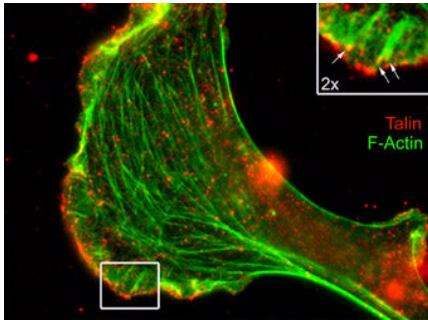
Talin is an important cytoskeletal component of integrin adhesion sites. Calpains cleave talin precursor (240 kDa) into an amino-terminal globular head domain of 47 kDa and a carboxyl-terminal 190 kDa rod domain. The talin head domain contains a FERM domain that binds integrins, PIP kinase (Type I), and FAK. The rod domain has several vinculin-binding sites, a second integrin-binding site, and two actin-binding sites. These talin protein-protein interactions are critical for integrin activation, focal adhesion formation, and cell migration. Talin regulation may occur through phosphorylation and regulated degradation. The talin head domain binds Smurf1, an E3 ubiquitin ligase, and this interaction leads to talin head ubiquitylation and degradation. Cdk5 can phosphorylate Ser-425 in the head domain, and this inhibits both binding to Smurf1 and subsequent degradation. The S425A talin mutant resists Cdk5 phosphorylation, increases susceptibility to Smurf1-mediated ubiquitylation, and inhibits cell migration. Thus, talin head phosphorylation may be important for regulating adhesion stability and cell migration

Images

Western blot of rat PC12 cells stimulated with Calyculin A (100 nM) for 30 min (lanes 1-4). The blot was treated with



lambda phosphatase (lanes 2 & 4), then probed with mouse monoclonal anti-Talin (8D4) (lanes 1 & 2) or rabbit polyclonal anti-Talin (Ser-425) (lanes 3 & 4) antibodies.



Immunocytochemical labeling of Talin relative to F-actin in chick fibroblasts. The cells were labeled with mouse monoclonal Talin (Rod domain) antibody (AN1985), then the antibody was detected using appropriate secondary antibody (Red). This labeling is compared to F-actin staining (Green). (Image provided by Dr. Gianluca Gallo at Drexel University).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.