

Technical Data Sheet

Purified Mouse Anti-Espin**Product Information**

Material Number:	611656
Size:	50 µg
Concentration:	250 µg/ml
Clone:	31/Espin
Immunogen:	Rat espin aa. 458-580
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse, Chicken
Target MW:	110 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Actin-binding proteins regulate the polymerization and depolymerization of actin, connect actin-based structures to membranes and to other cytoskeletal elements, power the movement of actin filaments, and cross-link actin filaments into bundles. Espins are actin binding and bundling proteins. The two isoforms of espin are the 30 kDa small espin found in brush border cells and the 110 kDa espin found in testis. Espin contains eight ankyrin repeats in the N-terminal region, two proline-rich peptides, an ATP/GTP binding P-loop domain, and a C-terminal actin bundling domain. Small espin is composed of the C-terminal actin bundling domain and a unique region at the N-terminus. Espin binds to actin with a higher affinity than small espin and is more efficient at actin bundling. During spermiogenesis, espin accumulates, along with forming parallel actin bundles, at the ectoplasmic specialization. These actin bundles anchor and position the spermatid within the seminiferous epithelium. Other actin binding proteins, such as α -actinin, vinculin, and fimbrin, have also been implicated in the formation of ectoplasmic specialization, however espin appears to function specifically in the testes.



Western blot analysis of Espin on rat testis lysate. Lane 1; 1:5000, lane 2: 1:10000, lane 3; 1:20000 dilution of anti-Espin.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611472	Rat Testis Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Bartles JR, Wierda A, Zheng L. Identification and characterization of espin, an actin-binding protein localized to the F-actin-rich junctional plaques of Sertoli cell ectoplasmic specializations. *J Cell Biol.* 1996; 109(pt 6):1229-1239.(Biology)

Bartles JR, Zheng L, Li A, Wierda A, Chen B. Small espin: a third actin-bundling protein and potential forked protein ortholog in brush border microvilli. *J Cell Biol.* 1998; 143(1):107-119.(Biology)

Chen B, Li A, Wang D, Wang M, Zheng L, Bartles JR. *Mol Biol Cell.* 1999; 10(12):4327-4339.(Biology)