

Technical Data Sheet

Purified Mouse Anti-FKBP12**Product Information**

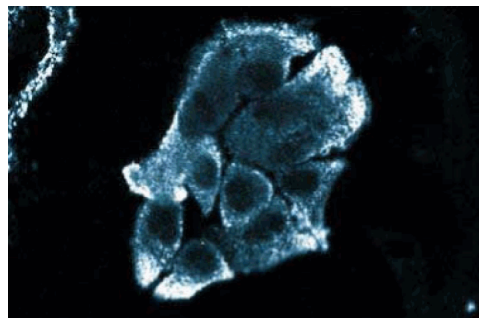
Material Number:	610808
Alternate Name:	FK506 Binding Protein 1A
Size:	50 µg
Concentration:	250 µg/ml
Clone:	8/FKBP12
Immunogen:	Human FKBP12 aa. 1-108
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Dog, Chicken
Target MW:	14 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Transforming growth factor- β binds to the TGF β family of heteromeric serine/threonine transmembrane receptors (type I and type II). Following binding of TGF β , the type II receptor (T β R-II) phosphorylates the type I receptor (T β R-I) which, in turn, conveys the signal. Since T β R-I and T β R-II can interact without the stimulation of TGF β , leading to unwanted activation, a regulatory mechanism exists. In a yeast genetic screen, immunophilin FKBP12 was associated with the type I receptor. Studies including co-immunoprecipitation, deletion, and point mutations confirmed this interaction. FKBP12 inhibits T β R-II mediated phosphorylation of T β R-I, inhibiting activation. FKBP12 binds via its rapamycin/Leu-Pro binding pocket to the Leu-Pro sequence adjacent to the phosphorylation site of T β R-I. This interaction is blocked by the addition of macrolides, rapamycin, and FK506. Furthermore, mutations in the binding sites of FKBP12 and T β R-I abrogates the binding and results in activation of the receptor without the addition of TGF β . Thus, FKBP12 is a regulatory protein for T β R-I and T β R-II-mediated signaling.



Western blot analysis of FKBP12 on a SW-13 cell lysate (Human adrenal gland carcinoma; ATCC CCL-105). Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-FKBP12 antibody.



Immunofluorescence staining of HS 766T cells (Human pancreatic carcinoma; ATCC HTB-134).

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
611475	SW-13 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/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

Chen YG, Liu F, Massague J. Mechanism of TGFbeta receptor inhibition by FKBP12. *EMBO J.* 1997; 16(13):3866-3876.(Biology)
Wang T, Donahoe PK, Zervos AS. Specific interaction of type I receptors of the TGF-beta family with the immunophilin FKBP-12. *Science.* 1994; 265(5172):674-676.(Biology)