Technical Data Sheet

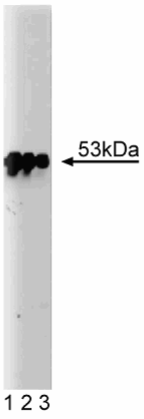
Purified Mouse Anti-Kanadaptin

Product Information

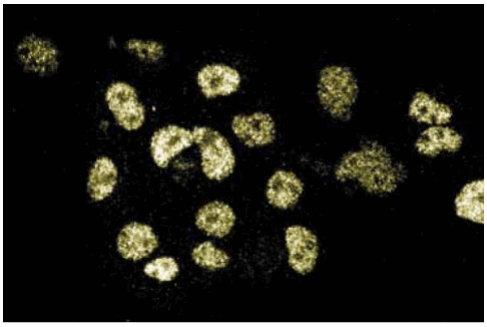
Material Number:	**611155**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	49/Kanadaptin
Immunogen:	Mouse Kanadaptin 60 - 171
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse
Target MW:	53 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The erythroid anion exchanger (AE1, band 3) is a membrane protein that, through its large cytoplasmic domain, binds to ankyrin and helps maintain the biconcave shape of erythrocytes. The alternatively spliced, kidney-specific isoform of AE1 (kAE1) can be retargeted from the apical to the basolateral surface of intercalated cells. However, kAE1 lacks a portion of the AE1 cytoplasmic domain and does not interact with ankyrin. Efforts to identify kAE1-binding proteins led to the discovery of kanadaptin (**k**idney **an**ion exchanger **adapt**or prote**in**) . Kanadaptin binds specifically to kAE1 and does not interact with either erythroid AE1 or ankyrin. Although kAE1 is present in intracellular vesicles and basolateral membranes, it colocalizes with kanadaptin exclusively in vesicles. Thus, it is thought that kanadaptin may shuttle kAE1-containing vesicles to their destination at the basolateral membrane and then dissociate and recycle. This idea is supported by the presence of a proline-rich region in kanadaptin that may serve as an SH3-binding domain and mediate protein-protein interactions. The presence of kanadaptin in various tissues suggests other roles which have yet to be described.



Western blot analysis of Kanadaptin on rat kidney lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-Kanadaptin.*



Immunofluorescent staining of A431 cells.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

BD Biosciences

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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
611466	Rat Kidney 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 J, Vijayakumar S, Li X, Al-Awqati Q. Kanadaptin is a protein that interacts with the kidney but not the erythroid form of band 3. *J Biol Chem.* 1998; 273(2):1038-1043.(Biology)