## Technical Data Sheet

## Purified Mouse Anti- ARF-3

## Product Information

## Material Number: <br> Alternate Name:

Size:
Concentration:
Clone:
Immunogen:
Isotype:
Reactivity:

Target MW:
Storage Buffer:

## 610784

ADP Ribosylation Factor-3
$50 \mu \mathrm{~g}$
$250 \mu \mathrm{~g} / \mathrm{ml}$
41/ARF3
Human ARF3 aa. 1-181
Mouse IgG1
QC Testing: Rat
Tested in Development: Human, Mouse, Chicken, Dog, Frog
20 kDa
Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09 \%$ sodium azide.

## Description

The ADP-ribosylation factors (ARFs) belong to the multigene family of small GTPases capable of activating cholera toxin. ARFs fall into three different classes: Class I is composed of ARF-1, ARF-2, and ARF-3; Class II consists of ARF-4 and ARF-5; and Class III includes ARF6. Unique to ARFs is their lack of intrinsic GTP hydrolysis activity, a high affinity for GDP in a Mg2+-dependent manner, and phospholipid requirement for nucleotide exchange. ARFs are involved in intravesicular acidification of microsomal vesicles, endosome fusion, nuclear membrane assembly, and formation of clathrin-coated vesicles. In addition, GTP and ARF-3 are required for the activation of phospholipase D (PLD), an early cellular response triggered by the binding of receptors on the cell surface in response to numerous extracellular signals. Although predominantly cytosolic, ARF-3 can be translocated to cellular membranes upon cellular stimulation. The transition between the GDP-bound ARF-3 to the GTP-ARF-3 is facilitated by a high molecular weight guanine nucleotide-exchange factor sensitive to brefeldin. ARF-3 has been reported to be the most abundant in brain, kidney, and liver.


## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at $-20^{\circ} \mathrm{C}$.

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## Application Notes

## Application

| Western blot | Routinely Tested |
| :--- | :--- |
| Immunoprecipitation | Not Recommended |
| Immunofluorescence | 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 |
| :--- | :--- | :--- | :--- |
| 611463 | Rat Cerebrum Lysate | $500 \mu \mathrm{~g}$ | $\frac{1.0 \mathrm{ml}}{\text { (none) }}$ |
| 554002 | HRP Goat Anti-Mouse Ig | (none) |  |

## 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

Cockcroft S, Thomas GM, Fensome A, et al. Phospholipase D: a downstream effector of ARF in granulocytes. Science. 1994; 263(5146):523-526.(Biology) Kahn R, Radding CM. Separation of the presynaptic and synaptic phases of homologous pairing promoted by recA protein. J Biol Chem. 1984; 259(12):6228-6234.(Biology)
Lee CM, Stevens LA, Hsu HC, et al. Expression in human endothelial cells of ADP-ribosylation factors, 20-kDa guanine nucleotide-binding proteins involved in the initiation of vesicular transport. J Mol Cell Cardiol. 1996; 28(9):1911-1920.(Biology)
Morinaga N, Tsai SC, Moss J, Vaughan M. Isolation of a brefeldin A-inhibited guanine nucleotide-exchange protein for ADP ribosylation factor (ARF) 1 and ARF3 that contains a Sec7-like domain. Proc Natl Acad Sci U S A. 1996; 93(23):12856-12860.(Biology)
Moss J, Vaughan M. ADP-ribosylation factors, $20,000 \mathrm{M}(\mathrm{r})$ guanine nucleotide-binding protein activators of cholera toxin and components of intracellular vesicular transport systems. Cell Signal. 1993; 5(4):367-379.(Biology)

