

## BACKGROUND

Beta-Adrenergic Receptor Kinase (beta-ARK1), also known as GRK2, is a member of the Serine/Threonine G protein-coupled receptor kinase superfamily.<sup>1</sup> It phosphorylates the beta-2-Adrenergic Receptors and appears to mediate agonist-specific desensitization observed at high agonist concentrations. This kinase is a ubiquitous cytosolic enzyme that regulates cardiac output and activity in response to catecholamines. It modulates beta-AR activity and abrogates beta-AR-dependent signals by directly phosphorylating the receptors.<sup>2</sup> Amounts of beta-ARK1 are increased in cardiac disease, where cardiac output is below normal, suggesting that the impairment of beta-AR activity could lead to certain forms of heart disease. Thus, there is great interest in generating therapeutic agents that can modulate the activity of the beta-ARK1.<sup>3</sup>

### References:

1. Rockman, H.A. et al: Nature 415:206-12, 2002
2. Hausdorff, W.P. et al: FASEB J. 4:2881-9, 1990
3. Hata, J.A. & Koch, W.J.: Mol. Intervent. 3:264-72, 2003

## TECHNICAL INFORMATION

### Source:

ARK1/GRK2 Antibody is a mouse monoclonal antibody raised against purified recombinant fragments of human ARK1/GRK2 expressed in *E. Coli*.

### Specificity and Sensitivity:

This antibody detects ARK1/GRK2 proteins without cross-reactivity with other family members.

**Storage Buffer:** PBS and 30% glycerol

### Storage:

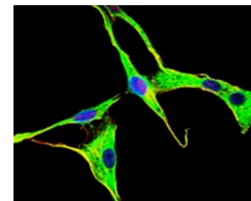
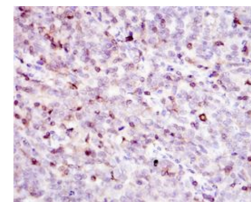
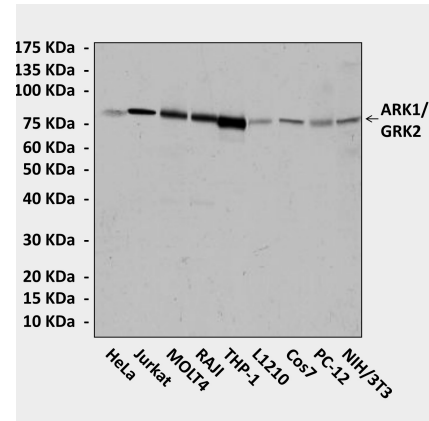
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1:50-200
ICC	1:50-200
FACS	n/d

*\*Optimal dilutions must be determined by end user.*

## QUALITY CONTROL DATA



**Top:** Western Blot detection of ARK1/GRK2 proteins in various cell lysates using ARK1/GRK2 Antibody. **Middle:** This antibody stains paraffin-embedded human cervical cancer tissue in immunohistochemical analysis. **Bottom:** It also stains NIH3T3 cells in confocal immunofluorescent studies (ARK1/GRK2 antibody: Green; Actin filaments: Red; DRAQ5 DNA Dye: Blue).

