



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

# GRK2 Antibody

Store at -20C  
#3982

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Hm Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 80	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P25098	<b>Entrez-Gene Id:</b> 156
-------------------------------	-----------------------------------	-----------------------------------	------------------------	----------------------------------	-------------------------------	-------------------------------

## Product Usage Information

### Application

Western Blotting  
Immunoprecipitation

### Dilution

1:1000  
1:25

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

GRK2 Antibody detects endogenous levels of total GRK2. This antibody may also detect GRK3, but does not cross-react with other GRKs.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal residues of human GRK2. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

G protein-coupled receptor kinase 2 (GRK2), also known as beta-adrenergic receptor kinase 1 (beta-ARK1), is a member of the GRK family, which phosphorylates the activated form of G protein-coupled receptors (GPCRs) and initiates the desensitization process of GPCR (1). GRK2 kinase activity and cellular localization are tightly regulated by interactions with activated receptors, G-beta and G-gamma subunits, adaptor proteins, phospholipids, caveolin, and calmodulin, as well as by phosphorylation (1). Protein kinase C (PKC) phosphorylation enhances GRK2 activity by promoting its membrane localization and by abolishing the inhibitory association of calmodulin (2,3). Protein kinase A (PKA) phosphorylates GRK2 at Ser685, facilitating the association of GRK2 with a beta-adrenergic receptor (4). Erk inhibits GRK2 activity via phosphorylation at Ser670 (5). Src phosphorylates GRK2 at multiple tyrosine residues (Tyr13, 86, and 92), which activates GRK2 activity and promotes GRK2 degradation (6,7).

## Background References

- Pitcher, J. A. et al. (1998) *Annu. Rev. Biochem.* 67, 653-692.
- Winstel, R. et al. (1996) *Proc. Natl. Acad. Sci. USA* 93, 2105-2109.
- Krasel, C. et al. (2001) *J. Biol. Chem.* 276, 1911-1915.
- Cong, M. et al. (2001) *J. Biol. Chem.* 276, 15192-15199.
- Pitcher, J. A. et al. (1999) *J. Biol. Chem.* 274, 34531-34534.
- Sarnago, S. et al. (1999) *J. Biol. Chem.* 274, 34411-34416.
- Penela, P. et al. (2001) *EMBO J.* 20, 5129-5138.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.