
anti-GRK 2

Cat #: HM1170
Rabbit polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

G protein-coupled receptor kinases (GRKs) phosphorylate G protein-coupled receptors and are involved in agonist-mediated desensitization. Six members of the GRK family have been identified: GRK 1 (rhodopsin kinase), two forms of β-adrenergic receptor kinase (βARK, βARK1 or GRK 2 and βARK2 or GRK 3), IT-11 (GRK 4), GRK 5 and GRK 6. Phosphorylation of receptors by GRKs appears to be strictly dependent on the receptor being in its agonist-activated state. GRK2 (Beta-adrenergic receptor kinase) phosphorylates the beta-2-adrenergic receptor and appears to mediate agonist-specific desensitization observed at high agonist concentrations.

SPECIFICITY

This antibody reacts specifically with GRK 2 of mouse, rat and human origin by Western blotting and immunohistochemistry.

Molecular Weight of GRK2: 80 kDa. Western blotting positive control: Ramos cell lysate.

IMMUNOGEN

A recombinant protein corresponding to carboxyl terminal of human GRK 2.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

1. Inglese, J., Freedman, N.J., Koch, W.J., and Lefkowitz, R.J. 1993. Structure and mechanism of the G protein-coupled receptor kinases. *J. Biol. Chem.* 268: 23735-23738.
2. Lorenz, W., Inglese, J., Palczewski, K., Onorato, J.J., Caron, M.G., and Lefkowitz, R.J. 1991. The receptor kinase family: primary structure of rhodopsin kinase reveals similarities to the beta-adrenergic receptor kinase. *Proc. Natl. Acad. Sci. USA* 88: 8715-8719.
3. Benovic, J.L., Onorato, J.J., Arriza, J.L., Stone, W.C., Lohse, M., Jenkins, N.A., Gilbert, D.J., Copeland, N.G., Caron, M.G., and Lefkowitz, R.J. 1991. Cloning, expression, and chromosomal localization of beta-adrenergic receptor kinase 2. *J. Biol. Chem.* 266: 14939-14946.
4. Premont, R.T., Koch, W.J., Inglese, J., and Lefkowitz, R.J. 1994. Identification, purification, and characterization of GRK5, a member of the family of G protein-coupled receptor kinases. *J. Biol. Chem.* 269: 6832-6841.
5. Cideciyan, A.V., Zhao, X., Nielsen, L., Khani, S.C., Jacobson, S.G. and Palczewski, K. (1998) Null mutation in the rhodopsin kinase gene slows recovery kinetics of rod and cone phototransduction in man. *Proc. Natl. Acad. Sci. U.S.A.* 95, 328-333.

6. Cong, M., Perry, S.J., Lin, F.T., Fraser, I.D., Hu, L.A., Chen, W., Pitcher, J.A., Scott, J.D. and Lefkowitz, R.J. (2001) Regulation of membrane targeting of the G protein-coupled receptor kinase 2 by protein kinase A and its anchoring protein AKAP79. *J. Biol. Chem.* 276, 15192-15199.
7. Krasel, C., Dammeier, S., Winstel, R., Brockmann, J., Mischak, H. and Lohse, M.J. (2001) Phosphorylation of GRK2 by protein kinase C abolishes its inhibition by calmodulin. *J. Biol. Chem.* 276, 1911-1915.
8. Chen, W., Ren, X.R., Nelson, C.D., Barak, L.S., Chen, J.K., Beachy, P.A., de Sauvage, F. and Lefkowitz, R.J. (2004) Activity-dependent internalization of smoothened mediated by beta-arrestin 2 and GRK2. *Science* 306, 2257-2260.

PRODUCTS FROM HYPROMATRIX, INC.**A. AntibodyArray™s:**

1. Signal Transduction AntibodyArray™
Catalog Number HM3000
2. Apoptosis AntibodyArray™
Catalog Number HM4000
3. Cell Cycle AntibodyArray™
Catalog Number HM5000

B. Staining AntibodyArray™s

1. Staining AntibodyArray™ I
Catalog Number HM8100
2. AntibodyArray Staining Apparatus
Catalog Number HM8000

C. Antibodies**1. HRP-conjugated antibodies**

- anti-phosphotyrosine
Catalog Number HM2040
- anti-phosphoserine
Catalog Number HM2070
- anti-phosphothreonine
Catalog Number HM2090

and more...

2. Primary antibodies

Hypromatrix offers a variety of high quality antibodies. For a complete list of antibodies and their specificities, please visit our web site at www.hypromatrix.com.

CONTACT

Hypromatrix, Inc.
100 Barber Avenue
Worcester, MA 01606
USA

Tel: 508-856-7900
Fax: 508-302-0748
Email: contact@hypromatrix.com
Web: www.hypromatrix.com