

β_3 -AR (C-5): sc-515763

BACKGROUND

β_3 -adrenergic receptors (β_3 -ARs) bind catecholamines (epinephrine, norepinephrine), and primarily regulate lipolysis and thermogenesis in adipose. β_3 -ARs are present in adipose tissues, heart, and in smooth muscle of bladder, colon, small intestine, and stomach. The human corpus cavernosum exhibits basal β_3 -AR-mediated vasorelaxant tone and activity is linked to inhibition of the RhoA/Rho-kinase pathway. β_3 -AR interacts directly with the SH3 domain of Src through proline-rich motifs (PXXP) in the third intracellular loop and the carboxy-terminus.

CHROMOSOMAL LOCATION

Genetic locus: *Adrb3* (mouse) mapping to 8 A2.

SOURCE

β_3 -AR (C-5) is a mouse monoclonal antibody raised against amino acids 351-400 mapping within a C-terminal cytoplasmic domain of β_3 -AR of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β_3 -AR (C-5) is available conjugated to agarose (sc-515763 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515763 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515763 PE), fluorescein (sc-515763 FITC), Alexa Fluor[®] 488 (sc-515763 AF488), Alexa Fluor[®] 546 (sc-515763 AF546), Alexa Fluor[®] 594 (sc-515763 AF594) or Alexa Fluor[®] 647 (sc-515763 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515763 AF680) or Alexa Fluor[®] 790 (sc-515763 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

β_3 -AR (C-5) is recommended for detection of β_3 -AR of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β_3 -AR siRNA (m): sc-39869, β_3 -AR shRNA Plasmid (m): sc-39869-SH and β_3 -AR shRNA (m) Lentiviral Particles: sc-39869-V.

Molecular Weight of β_3 -AR: 44 kDa.

Molecular Weight of glycosylated β_3 -AR: 68 kDa.

Positive Controls: mouse β_3 -AR transfected 293T whole cell lysate or mouse adipose tissue extract: sc-395042.

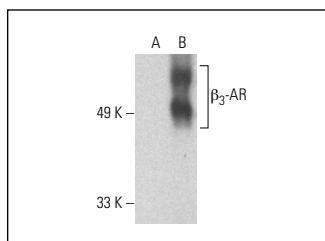
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

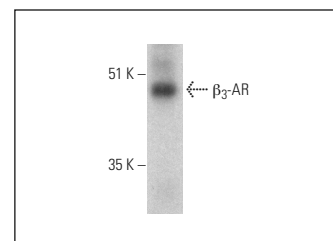
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



β_3 -AR (C-5): sc-515763. Western blot analysis of β_3 -AR expression in non-transfected (A) and mouse β_3 -AR transfected (B) 293T whole cell lysates.



β_3 -AR (C-5): sc-515763. Western blot analysis of β_3 -AR expression in mouse adipose tissue extract.

SELECT PRODUCT CITATIONS

- Hong, S., et al. 2018. Phosphorylation of β_3 adrenergic receptor at serine 247 by ERK MAP kinase drives lipolysis in obese adipocytes. *Mol. Metab.* 12: 25-38.
- Grzelka, K., et al. 2019. Effects of β_3 -adrenergic receptor stimulation on the resting holding current of medial prefrontal cortex pyramidal neurons in young rats. *Neurosci. Lett.* 698: 192-197.
- Fang, D., et al. 2019. The glycoprotein follistatin-like 1 promotes brown adipose thermogenesis. *Metab. Clin. Exp.* 98: 16-26.
- Wang, Z., et al. 2020. The protective effects of the β_3 adrenergic receptor agonist BRL37344 against liver steatosis and inflammation in a rat model of high-fat diet-induced nonalcoholic fatty liver disease (NAFLD). *Mol. Med.* 26: 54.
- Gencarelli, M., et al. 2020. 3-iodothyronamine affects thermogenic substrates' mobilization in brown adipocytes. *Biology* 9: 95.
- Kitano, T., et al. 2021. Opposing functions of α - and β -adrenoceptors in the formation of processes by cultured astrocytes. *J. Pharmacol. Sci.* 145: 228-240.
- Amato, R., et al. 2022. HIF-1-dependent induction of β_3 adrenoceptor: evidence from the mouse retina. *Cells* 11: 1271.
- Manigandan, S., et al. 2022. Loss of cytoplasmic FMR1-interacting protein 2 (CYFIP2) induces browning in 3T3-L1 adipocytes via repression of GABA-BR and activation of mTORC1. *J. Cell. Biochem.* 123: 863-877.
- Asif, H., et al. 2022. Title: β_3 adrenergic receptor signaling in the human myometrium. *Reprod. Sci.* E-published.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.