



XL α s (N-19): sc-18987

BACKGROUND

The GTP-binding proteins are well-known regulators of cellular functions, including vesicular transport. XL α s, for extra large α s, is a paternally expressed, 78 kDa plasma membrane-associated protein consisting of a novel 37 kDa XL domain followed by a 41 kDa α s domain. XL α s is specifically associated with the trans-Golgi network and occurs selectively in cells containing both the regulated and the constitutive pathway of protein secretion. Like G α _s, XL α s undergoes a conformational change upon binding of GTP γ S. In neuroendocrine cells, the two related G proteins, G α _s and XL α s, exhibit distinct properties with regard to receptor-mediated activation, but converge onto the same effector system, adenylyl cyclase. XL α s is found in adult neuroendocrine tissue, with a particularly high level of expression in the pituitary. The human Gnas gene maps to chromosome 20q13.2.

REFERENCES

1. Kehlenbach, R.H., Matthey, J., and Huttner, W.B. 1994. XL alpha s is a new type of G protein. *Nature* 372: 804-809.
2. Klemke, M., Pasolli, H.A., Kehlenbach, R.H., Offermanns, S., Schultz, G., and Huttner, W.B. 2000. Characterization of the extra-large G protein alpha-subunit XLalphas. II. Signal transduction properties. *J. Biol. Chem.* 275: 33633-33640.
3. Pasolli, H.A., Klemke, M., Kehlenbach, R.H., Wang, Y., and Huttner, W.B. 2000. Characterization of the extra-large G protein alpha-subunit XLalphas. I. Tissue distribution and subcellular localization. *J. Biol. Chem.* 275: 33622-33632.
4. Li, T., Vu, T.H., Zeng, Z.L., Nguyen, B.T., Hayward, B.E., Bonthron, D.T., Hu, J.F., and Hoffman, A.R. 2000. Tissue-specific expression of antisense and sense transcripts at the imprinted Gnas locus. *Genomics* 69: 295-304.
5. Weinstein, L.S., Yu, S., Warner, D.R., and Liu, J. 2001. Endocrine manifestations of stimulatory G protein alpha-subunit mutations and the role of genomic imprinting. *Endocr. Rev.* 22: 675-705.
6. Klemke, M., Kehlenbach, R.H., and Huttner, W.B. 2001. Two overlapping reading frames in a single exon encode interacting proteins--a novel way of gene usage. *EMBO J.* 20: 3849-3860.
7. Pasolli, H.A. and Huttner, W.B. 2001. Expression of the extra-large G protein alpha-subunit XLalphas in neuroepithelial cells and young neurons during development of the rat nervous system. *Neurosci. Letts.* 301: 119-122.

SOURCE

XL α s (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of XL α s of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18987 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

XL α s (N-19) is recommended for detection of XL α s of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with G α _s

Molecular Weight of XL α s: 78 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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