

KDEL receptor (FL-212): sc-33806

BACKGROUND

Soluble proteins in the endoplasmic reticulum (ER) contain a specific carboxy-terminal sequence KDEL (Lys-Asp-Glu-Leu) and include the coat proteins required for vesicle budding from the ER, proteins that form retrograde vesicles on post-ER compartments and integral membrane proteins that target vesicles to their correct destination. The retention of these soluble proteins in the ER depends on the interaction of the KDEL sequence with the corresponding KDEL receptor, also designated ERD2, in the Golgi apparatus. When KDEL proteins reach the Golgi complex, they are recognized by the KDEL receptor and transported retrograde in COPI-coated vesicles back to the ER. The small GTPase ADP-ribosylation factor 1 (ARF1), a regulator of vesicle transport, interacts with the KDEL receptor. Subsequently, this interaction allows the KDEL receptor to recruit a GTPase-activating protein (GAP) from the cytosol to membranes, which inactivates ARF1.

CHROMOSOMAL LOCATION

Genetic locus: KDEL1 (human) mapping to 19q13.33, KDEL2 (human) mapping to 7p22.1; Kdel1 (mouse) mapping to 7 B4, Kdel2 (mouse) mapping to 5 G2.

SOURCE

KDEL receptor (FL-212) is a rabbit polyclonal antibody raised against amino acids 81-120 mapping within an internal region of KDEL receptor 1 of human origin.

PRODUCT

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

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.

APPLICATIONS

KDEL receptor (FL-212) is recommended for detection of KDEL receptors 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

KDEL receptor (FL-212) is also recommended for detection of KDEL receptors 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

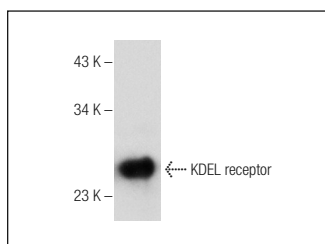
Molecular Weight of KDEL receptor: 25 kDa.

Positive Controls: mouse small intestine extract: sc-364252.

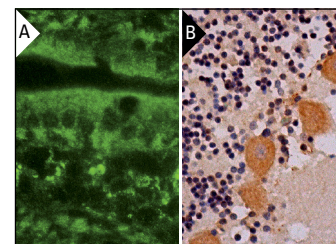
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



KDEL receptor (FL-212): sc-33806. Western blot analysis of KDEL receptor expression in mouse small intestine tissue extract.



KDEL receptor (FL-212): sc-33806. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of cells in granular layer and cells in molecular layer (B).

SELECT PRODUCT CITATIONS

- Johnson, J.S., et al. 2011. AAV exploits subcellular stress associated with inflammation, endoplasmic reticulum expansion, and misfolded proteins in models of cystic fibrosis. *PLoS Pathog.* 7: e1002053.
- Numata, Y., et al. 2013. Depletion of molecular chaperones from the endoplasmic reticulum and fragmentation of the Golgi apparatus associated with pathogenesis in Pelizaeus-Merzbacher disease. *J. Biol. Chem.* 288: 7451-7466.
- Romero, A.M., et al. 2014. Chronic alcohol exposure affects the cell components involved in membrane traffic in neuronal dendrites. *Neurotox. Res.* E-published.

PROTOCOLS

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



Try **KDEL receptor (KR-10): sc-57347**, our highly recommended monoclonal alternative to KDEL receptor (FL-212).