**BACKGROUND**

Misfolded proteins in the endoplasmic reticulum (ER) evoke the ER stress response. ER chaperones and misfolded proteins exit to the secretory pathway and are retrieved to the ER, during which process the KDEL ER tag plays an important role. KDEL represents an ER C-terminal tetrapeptide retention signal (Lys-Asp-Glu-Leu). This specific tag blocks the secretion of proteins. The ER retention of these proteins is accomplished via a pathway involving the binding of escaped proteins through KDEL tags to a KDEL receptor in a post-ER compartment. The protein-receptor complex is then transported back to the ER. KDEL2 is one of the receptors that cycle between the Golgi apparatus and the ER, returning proteins containing the KDEL signal to the ER. This can be useful in a research setting, since a target protein containing the KDEL ER retention signal can be coexpressed with KDEL2 and it will be redistributed to the ER.

**REFERENCES**


**SOURCE**

KDEL ER Marker (10C3) is a mouse monoclonal antibody against amino acids 649-654 of GRP 78 of rat origin.

**PRODUCT**

Each vial contains 100 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

KDEL ER Marker (10C3) is recommended for detection of proteins containing the SEKDEL sequence in mammals, birds, insects and plants; recognises GPR78 and GPR94 with particular prominence 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Positive Controls: HeLa whole cell lysate: sc-2200, rat liver extract: sc-2395 or Hep G2 cell lysate: sc-2227.

**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**

KDEL ER Marker (10C3): sc-58774. Western blot analysis of KDEL ER Marker expression in HeLa (A), HEK 293 (B) and Hep G2 (C) whole cell lysates and rat liver tissue extract (D).

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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