

**KDEL Receptor Antibody**  
**KDEL Receptor Antibody, Clone KR-10**  
**Catalog # ASM10041**

**Specification**

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**KDEL Receptor Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">O99JH8</a>
Other Accession	<a href="#">NP_598711.1</a>
Host	<b>Mouse</b>
Isotype	<b>IgG1</b>
Reactivity	<b>Human, Mouse, Rat, Rabbit, Hamster, Monkey, Pig, Chicken, Xenopus, Bovine, Sheep, Dog, Drosophila</b>
Clonality	<b>Monoclonal</b>

**Description**  
Mouse Anti-Bovine KDEL Receptor Monoclonal IgG1

**Target/Specificity**  
Detects ~25kDa.

**Other Names**  
ERD2 Antibody, ERD2.1 Antibody, ERD21 Antibody, HDEL Antibody, KDEL Antibody, KDEL R1 Antibody, KDEL R1 Antibody, PM23 Antibody

**Immunogen**  
A 21 residue synthetic peptide (amino acids 192-212) based on the bovine KDEL receptor and the peptide coupled to KLH

**Purification**  
Protein G Purified

Storage **-20°C**  
**Storage Buffer**  
PBS pH7.2, 50% glycerol, 0.09% sodium azide

Shipping Temperature **Blue Ice or 4°C**

**Certificate of Analysis**  
1 µg/ml was sufficient for detection of KDEL receptor in 20 µg monkey Vero cell lysate by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:AP as the secondary.

**Cellular Localization**  
Endoplasmic Reticulum

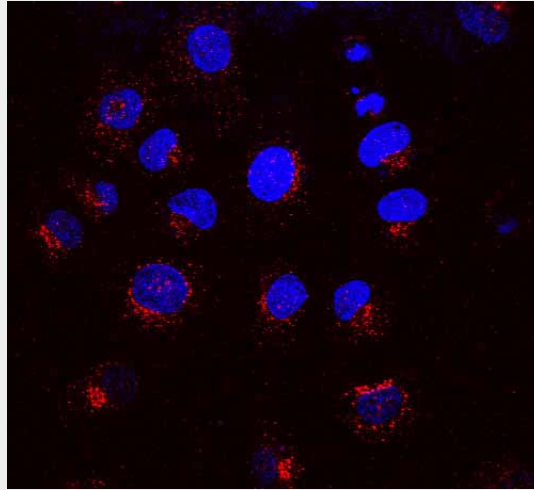
**KDEL Receptor Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

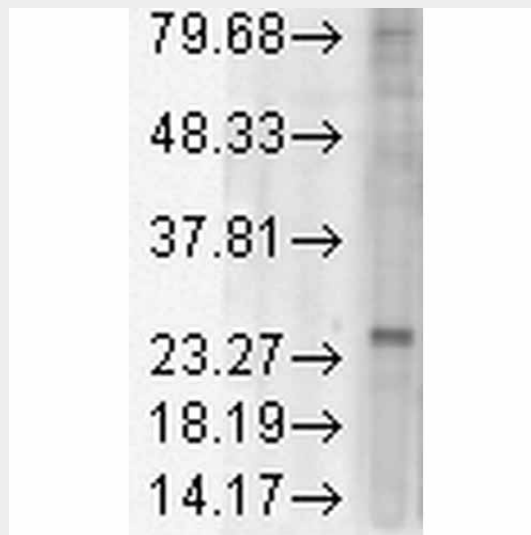
- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### KDEL Receptor Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-KDEL Receptor Monoclonal Antibody, Clone KR-10 (ASM10041). Tissue: NRK cells. Species: Rat. Primary Antibody: Mouse Anti-KDEL Receptor Monoclonal Antibody (ASM10041) at 1:1000. Secondary Antibody: APC Goat Anti-Mouse (red). Counterstain: DAPI (blue) nuclear stain. Courtesy of: Institute of Mol. and Cell Bio, Singapore.



Western Blot analysis of Rat tissue lysate showing detection of KDEL Receptor protein using Mouse Anti-KDEL Receptor Monoclonal Antibody, Clone KR-10 (ASM10041). Load: 15  $\mu$ g. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-KDEL Receptor Monoclonal Antibody (ASM10041) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

### KDEL Receptor Antibody - Background

The endoplasmic reticulum is part of a protein sorting pathway, or in essence, the transportation system of the eukaryotic cell. The majority of endoplasmic reticulum resident proteins are retained in the endoplasmic reticulum through a retention motif. This motif is composed of four amino acids at the C-terminal end of the protein sequence. The most common retention sequence is KDEL (lys-asp-glu-leu). However, variation on KDEL does occur and other sequences can also give rise to endoplasmic reticulum retention (6). There are three KDEL receptors in mammalian cells, all have a very high degree of sequence identity; and all are located within the cis-Golgi and its intermediate compartments (4).

In terms of function, KDEL receptors interact with GAP (GTPase-activating protein) of ARF1, which is involved in COPI dependent vesicle transport, and the KDEL receptor may also be responsible for the recruitment of this ARF1 to membranes which can then aid in the regulation of vesicle budding (3). It is also important to note that the KDEL receptor exhibits extensive sequence identity o yeast protein Erd2p, which is a receptor for the yeast ER retention signal (4, 5).

### **KDEL Receptor Antibody - References**

1. Whiteman P., and Handford P.A. (2003) *Hum Mol Genet* 12(7): 727-737.
2. Forthoffer N., et al. (2002) *J Bioenerg Biomemb* 34(3): 209-219.
3. Aoe T., et al. (1997) *EMBO J.* 16: 7305-7316.
4. Tang B.L., Wong S.H, Qi X.L. Low S.H., and Hong W. (1993) *J. Cell Biol.* 120: 325-328.
5. Lewis M.J. and Pelham H.R. (1990) *Nature* 348: 162-163.
6. Spurger L. (2002). *Endoplasmic reticulum: Structure and function.* University of Texas Medical Branch. Retrieved September 13, 2006, from <http://cellbio.utmb.edu/cellbio/rer1.htm>