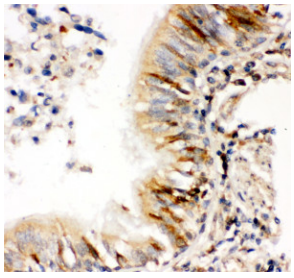
ERp57 Antibody / GRP58 Antibody (R30764)

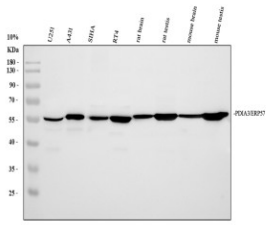
Catalog No.	Formulation	Size
R30764	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P30101
Localization	Cytoplasmic, membrane
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This ERp57 Antibody / GRP58 Antibody is available for research use only.



ERp57 Antibody Human Lung Cancer IHC. IHC staining of FFPE human lung cancer tissue using ERp57 Antibody. Heat-induced epitope retrieval was performed in EDTA buffer (pH 8.0), followed by blocking with 10% goat serum. The tissue was incubated with the antibody at 2 ug/ml overnight at 4Â°C, followed by peroxidase-conjugated goat anti-rabbit IgG and DAB detection. Positive ERp57 staining is observed in the tumor epithelium. This ERp57 Antibody, also called a GRP58 Antibody, demonstrates ERp57 expression in human lung cancer and supports studies of ER protein folding, proteostasis and cellular stress responses.



ERp57 Antibody Human, Mouse and Rat WB. Western blot analysis of ERp57 in human U251, A431, SiHa and RT4 cell lysates, rat brain and testis tissue lysates, and mouse brain and testis tissue lysates using ERp57 Antibody. Lane 1: U251; Lane 2: A431; Lane 3: SiHa; Lane 4: RT4; Lane 5: rat brain; Lane 6: rat testis; Lane 7: mouse brain; Lane 8: mouse testis. A specific band is detected at approximately 57 kDa, consistent with the expected molecular weight of PDIA3/ERp57. This ERp57 Antibody, also called a GRP58 Antibody, detects ERp57 across human, rat and mouse samples and supports studies of ER protein folding, disulfide bond formation and cellular proteostasis.

Description

ERp57 Antibody / GRP58 Antibody recognizes ERp57, an endoplasmic reticulum protein encoded by the PDIA3 gene and also widely known as GRP58. ERp57 is a member of the protein disulfide isomerase family and participates in the formation, rearrangement and reduction of disulfide bonds during protein folding. Within the endoplasmic reticulum, ERp57 works closely with the lectin chaperones calnexin and calreticulin to promote the proper maturation of newly synthesized glycoproteins. These functions make ERp57 an important component of ER proteostasis and the cellular machinery responsible for maintaining protein quality control.

ERp57 contains thioredoxin-like domains that support oxidoreductase activity and interactions with partner proteins. Its association with calnexin and calreticulin directs ERp57 toward glycoprotein substrates undergoing folding in the ER lumen. By catalyzing disulfide bond formation and isomerization, GRP58 helps proteins achieve conformations compatible with normal trafficking and function. Proteins that fail to fold correctly can instead be retained within the ER and directed toward quality-control pathways, connecting ERp57 activity with broader mechanisms of proteostasis and cellular responses to protein-folding stress.

In addition to its role in glycoprotein folding, ERp57 contributes to antigen processing and presentation. PDIA3 is a component of the major histocompatibility complex class I peptide-loading complex, where it associates with proteins including tapasin and calreticulin. This complex facilitates the loading of antigenic peptides onto MHC class I molecules before their transport to the cell surface. An ERp57 Antibody can therefore support studies of both ER protein quality control and molecular mechanisms involved in antigen presentation and immune recognition.

GRP58 has also been investigated outside its classical ER-associated functions. PDIA3 has been detected in additional cellular compartments and has been linked to processes involving cellular stress responses, signaling and regulation of protein interactions. Changes in PDIA3 expression have been studied in cancer, neurobiology, metabolic disease and conditions associated with disrupted protein homeostasis. These diverse observations have expanded interest in ERp57 beyond its original characterization as an ER oxidoreductase while emphasizing the importance of cellular context when interpreting its biological functions.

ERp57 provides a useful molecular connection between protein folding, ER quality control and antigen presentation, making it relevant to broader studies of cellular proteostasis. Its cooperation with calnexin and calreticulin is particularly important for the maturation and quality control of glycoproteins within the secretory pathway. NSJ Bioreagents supplies antibodies to ERp57 and related proteins involved in protein folding and cellular homeostasis. An ERp57 Antibody can support research on GRP58, disulfide bond formation, ER proteostasis, glycoprotein folding and antigen processing.

For additional information on ERp57/GRP58 and its roles in protein folding, ER quality control and cellular proteostasis, see our PDIA3 Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the ERp57 Antibody / GRP58 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 172-188 (LKAASNLRDNYRFAHTN) were used as the immunogen for this ERp57 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the ERp57 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ERp57 antibody, GRP58 antibody, PDIA3 antibody, Protein Disulfide-Isomerase A3 antibody, 58 kDa Glucose-Regulated Protein antibody, ERp60 antibody

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