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AP06149PU-N Polyclonal Antibody to HSPA5 / GRP78 - Aff - Purified

Alternate names: 78 kDa glucose-regulated protein, BiP, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70 kDa protein 5, Immunoglobulin heavy chain-binding protein

Quantity: 0.1 mg

Concentration: 1.0 mg/ml

Background: The HSP 70 family comprises four highly conserved proteins, HSP 70, HSC 70, GRP 75 and GRP 78, which serve a variety of roles. They act as molecular chaperones facilitating the assembly of multi-protein complexes, participate in the translocation of polypeptides across cell membranes and to the nucleus, and aid in the proper folding of nascent polypeptide chains. HSC 70, GRP 75 and GRP 78 are constitutively expressed in primate cells. HSP 70 expression is strongly induced in response to heat stress. HSP 70 and HSC 70, which are found in both the cytosol and nucleus of mammalian cells, play key roles in the cytosolic endoplasmic reticulum and mitochondrial import machinery. They are involved in chaperoning nascent polypeptide chains and in protecting cells against the accumulation of improperly folded proteins. GRP 78 is localized in the endoplasmic reticulum, where it receives imported secretory proteins and is involved in the folding and translocation of nascent peptide chains. Research indicates that members of the HSP 70 family may act as force-generating motors, relying on the hydrolysis of ATP for their activity.

Uniprot ID: P11021

NCBI: NP_005338.1

GeneID: 3309

Host: Rabbit

Immunogen: Synthetic peptide, corresponding to amino acids 611-660 of Human GRP78.

Format:
State: Liquid purified Ig fraction (› 95% pure by SDS-PAGE)
Purification: Affinity Chromatography using epitope-specific immunogen
Buffer System: Phosphate buffered saline (PBS), pH~7.2
Preservatives: 0.05% Sodium Azide

Applications:
Western blot: 1/500-1/1000.
Immunofluorescence: 1/50-1/200.
Immunohistochemistry on Paraffin Sections: 1/50-1/200.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight: ~ 78 kDa

Specificity: This antibody detects endogenous levels of GRP78 protein.
(region surrounding Pro641)

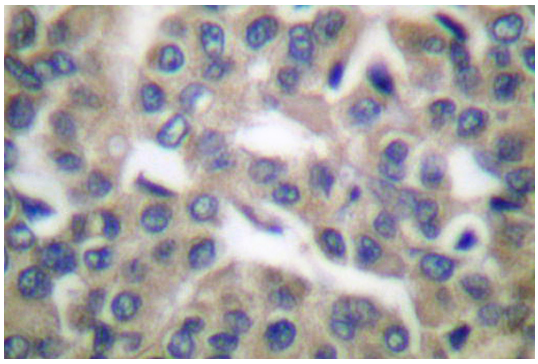
Species Reactivity:
Tested: Human.
Expected from sequence similarity: Mouse and Rat.

Storage:

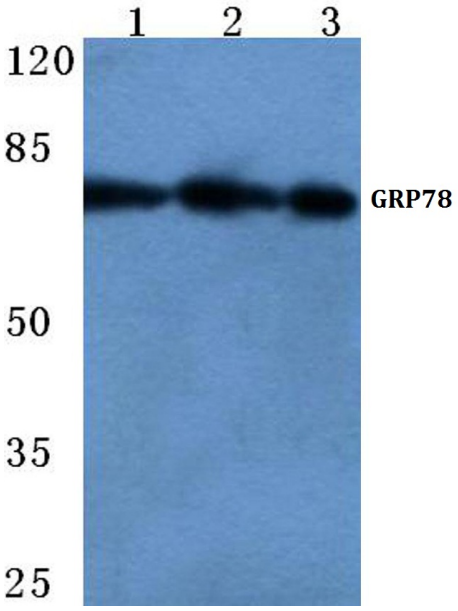
Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: One year from despatch.

Pictures:

Immunohistochemistry (IHC) analyzes of GRP78 antibody (Cat.-No AP06149PU-N) in paraffin-embedded human breast carcinoma tissue.



Western blot (WB) analysis of GRP78 antibody (Cat.-No AP06149PU-N) at 1/500 dilution
Lane 1: MCF-7 cell lysate.
Lane 2: Mouse liver tissue lysate.
Lane 3: Rat liver tissue lysate.



Immunohistochemistry (IHC) analyzes of GRP78 antibody (Cat.-No AP06149PU-N) in paraffin-embedded human breast carcinoma tissue at 1/100.