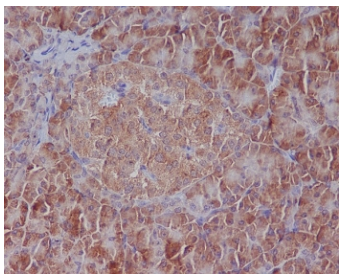
BiP Antibody / Immunoglobulin Heavy Chain Binding Protein Antibody [clone BOO-8] (RQ5350)

Catalog No.	Formulation	Size
RQ5350	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

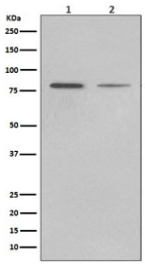
Recombinant RABBIT MONOCLONAL

Bulk quote request

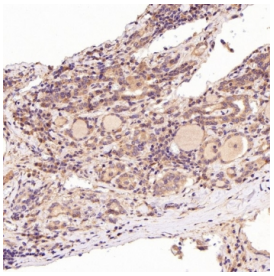
Availability	1-2 weeks
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	BOO-8
Purity	Affinity purified
UniProt	P11021
Localization	Cytoplasmic
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:50-1:200 Immunofluorescence: 1:50-1:100
Limitations	This BiP Antibody / Immunoglobulin Heavy Chain Binding Protein Antibody is available for research use only.



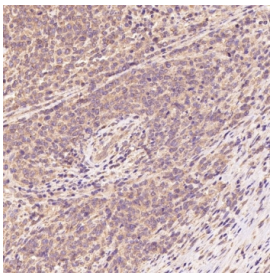
BiP Antibody Human Pancreas IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of human pancreas tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates cytoplasmic expression throughout the pancreatic tissue, with strong signal in exocrine acinar cells and comparatively moderate staining within the pancreatic islet. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of secretory protein folding and endoplasmic reticulum homeostasis in human pancreas.



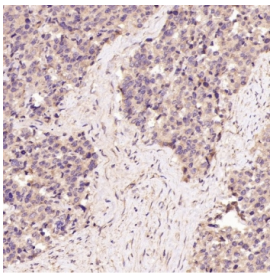
Western blot testing of human 1) LNCaP and 2) HepG2 cell lysate with BiP antibody. Predicted molecular weight: ~73 kDa, but routinely observed at 70-78 kDa.



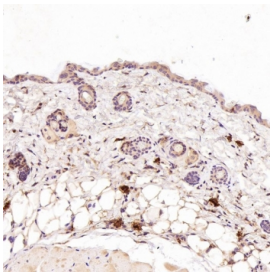
BiP Antibody Human Thyroid Cancer IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of human thyroid cancer tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates variable cytoplasmic expression in malignant thyroid epithelial cells, including cells surrounding colloid-containing follicular structures, with comparatively limited stromal signal. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of endoplasmic reticulum stress and protein-folding demand in thyroid cancer.



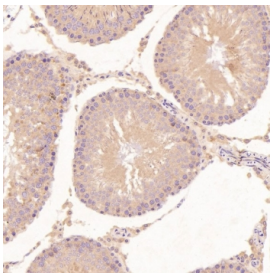
BiP Antibody Human Non-Hodgkin Lymphoma IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of human non-Hodgkin lymphoma tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates widespread, variable cytoplasmic expression among the neoplastic lymphoid cells, with weak to moderate signal intensity across the tissue. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of secretory protein processing and endoplasmic reticulum stress in lymphoid malignancies.



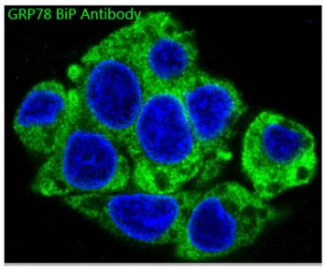
BiP Antibody Human Prostate Cancer IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of human prostate cancer tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates weak to moderate cytoplasmic expression in malignant prostate epithelial cells, with variable intensity across the tumor and limited staining in the intervening stroma. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of protein-folding demand and endoplasmic reticulum stress in prostate cancer.



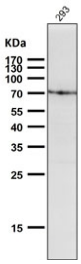
BiP Antibody Mouse Skin IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of mouse skin tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates cytoplasmic expression in epidermal keratinocytes and cells associated with cutaneous adnexal structures, with scattered signal in the underlying dermis. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of endoplasmic reticulum homeostasis and cellular stress responses in mouse skin.



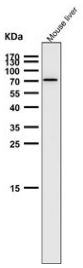
BiP Antibody Rat Testis IHC. BiP was detected in a formalin-fixed, paraffin-embedded section of rat testis tissue. Heat-induced epitope retrieval was performed by boiling the section in 10 mM citrate buffer, pH 6.0, for 10â€“20 minutes followed by cooling at room temperature for 20 minutes. Staining with BiP antibody clone BOO-8 demonstrates diffuse cytoplasmic expression among developing germ cell populations within the seminiferous tubules, with comparatively limited interstitial staining. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports studies of secretory protein processing, endoplasmic reticulum homeostasis and stress responses in rat reproductive tissue.



BiP Antibody HepG2 Liver Cancer Cell IF. BiP was detected in formalin-fixed, paraffin-embedded human HepG2 liver cancer cells following heat-induced epitope retrieval by steaming in citrate buffer, pH 6.0, for 20 minutes. Immunofluorescent staining with BiP antibody clone BOO-8 shows the target protein in green, while nuclei were counterstained with DAPI and appear blue. BiP displays strong granular and reticular cytoplasmic staining with prominent perinuclear distribution, consistent with localization to the endoplasmic reticulum. This BiP Antibody, an immunoglobulin heavy chain binding protein antibody, supports cellular studies of protein folding and endoplasmic reticulum stress.



Western blot testing of human HEK293 cell lysate with BiP antibody. Predicted molecular weight: ~73 kDa, but routinely observed at 70-78 kDa.



Western blot testing of mouse liver tissue lysate with BiP antibody. Predicted molecular weight: ~73 kDa, but routinely observed at 70-78 kDa.

Description

BiP Antibody clone BOO-8 is a recombinant rabbit monoclonal antibody that recognizes binding immunoglobulin protein, an endoplasmic reticulum chaperone encoded by the HSPA5 gene. BiP is also widely known as GRP78 because its expression increases in response to glucose deprivation and other forms of cellular stress. The name binding immunoglobulin protein reflects its original identification through association with incompletely assembled immunoglobulin heavy chains. BiP belongs to the HSP70 family and uses cycles of ATP binding and hydrolysis to bind newly synthesized or misfolded proteins within the endoplasmic reticulum lumen.

BiP assists protein folding, prevents inappropriate aggregation and retains incompletely assembled proteins within the endoplasmic reticulum until they achieve suitable conformations. Proteins that cannot be properly folded may be directed toward endoplasmic reticulum-associated degradation. Through these functions, BiP helps maintain the quality of proteins entering the secretory pathway. An Immunoglobulin Heavy Chain Binding Protein Antibody is particularly relevant to studies of antibody-producing cells, where large quantities of immunoglobulin chains place substantial demands on endoplasmic reticulum folding and assembly systems.

BiP is also a central regulator of the unfolded protein response. Under unstressed conditions, it associates with the endoplasmic reticulum stress sensors PERK, IRE1 and ATF6. Accumulation of unfolded proteins recruits BiP away from these sensors, allowing them to initiate adaptive signaling pathways. The resulting response can reduce general protein synthesis, increase chaperone production and promote the clearance of damaged proteins. When stress is prolonged or cannot be resolved, unfolded protein response signaling may instead contribute to apoptosis. A BiP Antibody can therefore support research into the mechanisms that determine whether stressed cells recover or undergo cell death.

BiP expression is frequently examined in models of cancer, neurodegeneration, metabolic disease, inflammation and secretory cell biology. Increased protein abundance can indicate elevated endoplasmic reticulum folding demand or activation of adaptive stress pathways. Researchers may use BiP Antibody clone BOO-8 in validated antibody-based applications to evaluate protein expression, localization or changes following experimental treatment. The recombinant production method supports consistent antibody identity between manufacturing batches. NSJ Bioreagents supplies this BiP Antibody for research into immunoglobulin assembly, protein quality control, endoplasmic reticulum homeostasis and unfolded protein response signaling.

For additional antibodies targeting BiP / HSPA5, including products validated across multiple species and applications, visit our GRP78 Antibody page for endoplasmic reticulum stress and protein-folding research.

Application Notes

Optimal dilution of the BiP Antibody / Immunoglobulin Heavy Chain Binding Protein Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human HSPA5 / BiP was used as the immunogen for the BiP antibody.

Storage

Store the BiP antibody at -20oC.

Alternate Names

Immunoglobulin Heavy Chain Binding Protein Antibody, GRP78 Antibody, HSPA5 Antibody, Endoplasmic Reticulum Chaperone BiP Antibody, Binding Immunoglobulin Protein Antibody, Glucose-Regulated Protein 78 Antibody, Heat Shock Protein Family A Member 5 Antibody

Copyright © NSJ Bioreagents. All rights reserved.