Product Name: HSPA5 Mouse Monoclonal Antibody
Catalog #: AMM80834

Summary

Production Name	HSPA5 Mouse Monoclonal Antibody
Description	Mouse monoclonal Antibody
Host	Mouse
Application	WB,IHC,ICC,ELISA,FC
Reactivity	Human,Mouse,Rat,Monkey,Rabbit

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Purified antibody in PBS with 0.05% sodium azide.
Purification	Affinity Purification

Immunogen

Gene Name	HSPA5
Alternative Names	BIP; MIF2; GRP78; FLJ26106; HSPA5
Gene ID	3309.0
SwissProt ID	P11021.Purified recombinant fragment of human HSPA5 expressed in E. Coli.

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:500,ICC 1:50-1:500,ELISA 1:5000-1:20000,FC 1:200-1:400
Molecular Weight	78kDa

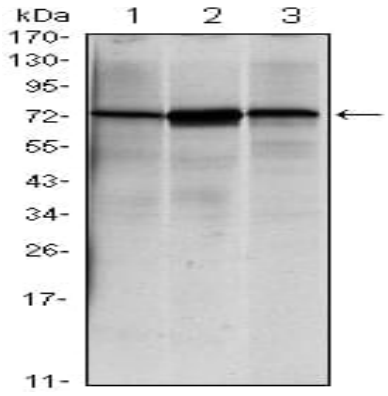
Background

When Chinese hamster K12 cells are starved of glucose, the synthesis of several proteins, called glucose-regulated proteins

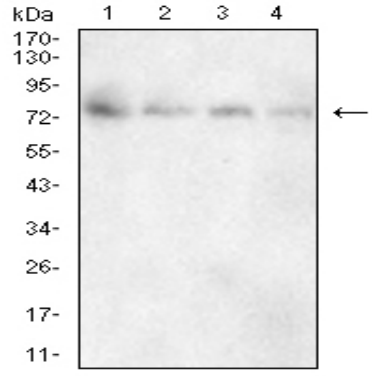
(GRPs), is markedly increased. Hendershot et al. (1994) (PubMed 8020977) pointed out that one of these, GRP78 (HSPA5), also referred to as 'immunoglobulin heavy chain-binding protein' (BiP), is a member of the heat-shock protein-70 (HSP70) family and is involved in the folding and assembly of proteins in the endoplasmic reticulum (ER). Because so many ER proteins interact transiently with GRP78, it may play a key role in monitoring protein transport through the cell.Probably plays a role in facilitating the assembly of multimeric protein complexes inside the ER.The HSP70 proteins are ubiquitous molecular chaparones that are found in all organisms and tissue types. Like other members of the HSP70 family, BiP is a peptide-binding ATPase that is able to differentiate native proteins from unfolded polypeptides. BiP does not bind to fully folded and assembled proteins, except in the presence of other co-chaparones. BiP is involved in a number of key mechanisms and pathways including polypeptide translocation across the endoplasmic reticulum, folding, assembly, transport of secreted or membrane proteins, and the regulation of calcium homeostasis. Although BiP is relatively abundant, marked increases in BiP occur where there is an accumulation of unfolded polypeptides. For this reason, BiP has been identified as a marker for various disease states that are associated with secretory and transmembrane protein misfolding.

Research Area

Image Data



Western blot analysis using HSPA5 mouse mAb against NIH/3T3 (1), Hela (2) and Jurkat (3) cell lysate.



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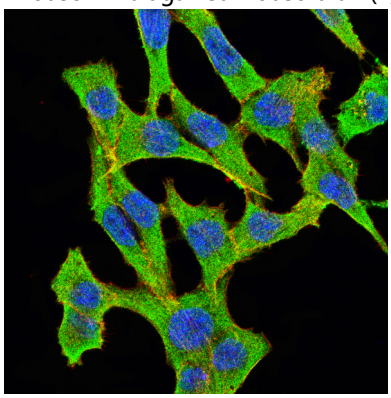
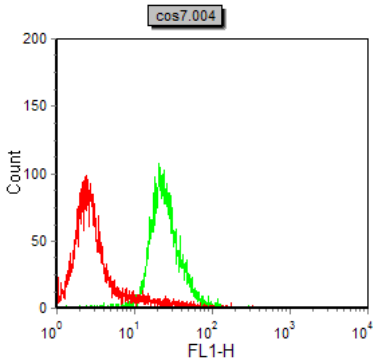
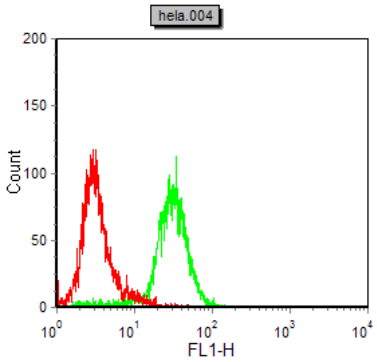
Western blot analysis using HSPA5 mouse mAb against Mouse brain(1)PC-12(2)F9(3)COS-7(4) cell lysate.



Immunofluorescence analysis of COS7 cells using HSPA5 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin.



Flow cytometric analysis of COS7 cells using HSPA5 mouse mAb (green) and negative control (red).



Flow cytometric analysis of Hela cells using HSPA5 mouse mAb (green) and negative control (red).

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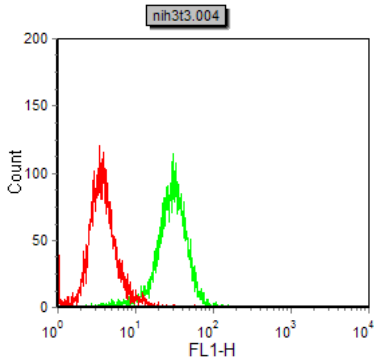
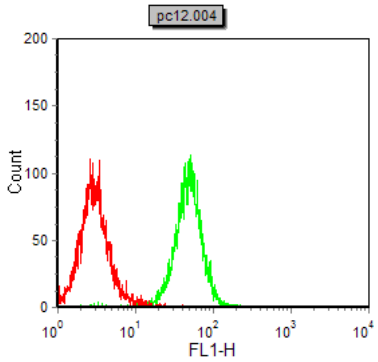
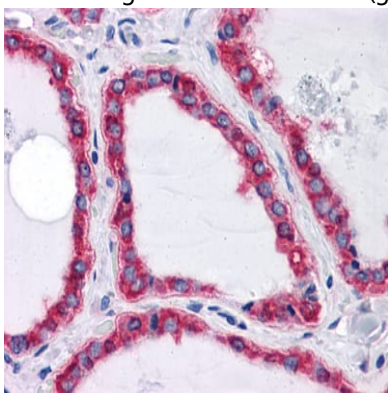


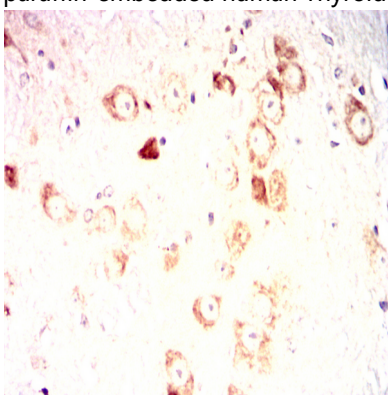
Flow cytometric analysis of NIH/3T3 cells using HSPA5 mouse mAb (green) and negative control (red).



Flow cytometric analysis of PC-12 cells using HSPA5 mouse mAb (green) and negative control (red).



Immunohistochemical analysis of paraffin-embedded human Thyroid tissues using HSPA5 mouse mAb



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Immunohistochemical analysis of paraffin-embedded Mouse cerebellum using HSPA5 mouse mAb with DAB staining.

Note

For research use only.