

Endoplasmic Reticulum Chaperone BiP (HSPA5) Antibody

Catalogue No.:abx012357



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



Immunohistochemical analysis of paraffin-embedded human Thyroid tissues using HSPA5 antibody.

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.

Target:	Endoplasmic Reticulum Chaperone BiP (HSPA5)
Clonality:	Monoclonal
Reactivity:	Human
Tested Applications:	ELISA, WB, IHC
Host:	Mouse

Recommended dilutions: ELISA: 1/10000, WB: 1/500 - 1/2000, IHC: 1/200 - 1/1000. Optimal dilutions/concentrations should be determined by the end user.

Datasheet Version: 3.0.0 Revision date: 21 Jun 2025



Conjugation:	Unconjugated
Immunogen:	Purified recombinant fragment of human HSPA5 expressed in E. coli.
Isotype:	IgG ₁
Form:	Liquid
Purification:	Unpurified ascites.
Storage:	Aliquot and store at -20°C. Avoid repeated freeze/thaw cycles.
UniProt Primary AC:	P11021 (<u>UniProt</u> , <u>ExPASy</u>)
Gene Symbol:	HSPA5
GenelD:	3309
OMIM:	138120
HGNC:	5238
KEGG:	hsa:3309
Ensembl:	ENSG0000044574
String:	<u>9606.ENSP00000324173</u>
Molecular Weight:	78 kDa
Buffer:	Ascitic fluid containing 0.03% sodium azide.
Concentration:	Not determined.
Note:	THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.