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BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Hemopexin HPX Antibody

Catalog Number: A02237-1

About HPX

Binds peptides derived from antigens that access the endocytic route of antigen presenting cells (APC) and presents them on the cell surface for recognition by the CD4 T-cells. The peptide binding cleft accommodates peptides of 10-30 residues. The peptides presented by MHC class II molecules are generated mostly by degradation of proteins that access the endocytic route, where they are processed by lysosomal proteases and other hydrolases. Exogenous antigens that have been endocytosed by the APC are thus readily available for presentation via MHC II molecules, and for this reason this antigen presentation pathway is usually referred to as exogenous. As membrane proteins on their way to degradation in lysosomes as part of their normal turn-over are also contained in the endosomal/lysosomal compartments, exogenous antigens must compete with those derived from endogenous components. Autophagy is also a source of endogenous peptides, autophagosomes constitutively fuse with MHC class II loading compartments. In addition to APCs, other cells of the gastrointestinal tract, such as epithelial cells, express MHC class II molecules and CD74 and act as APCs, which is an unusual trait of the GI tract. To produce a MHC class II molecule that presents an antigen, three MHC class II molecules (heterodimers of an alpha and a beta chain) associate with a CD74 trimer in the ER to form a heterononamer. Soon after the entry of this complex into the endosomal/lysosomal system where antigen processing occurs, CD74 undergoes a sequential degradation by various proteases, including CTSS and CTSL, leaving a small fragment termed CLIP (class-II-associated invariant chain peptide). The removal of CLIP is facilitated by HLA-DM via direct binding to the alpha-beta-CLIP complex so that CLIP is released. HLA-DM stabilizes MHC class II molecules until primary high affinity antigenic peptides are bound. The MHC II molecule bound to a peptide is then transported to the cell membrane surface. In B-cells, the interaction between HLA-DM and MHC class II molecules is regulated by HLA-DO. Primary dendritic cells (DCs) also to express HLA-DO. Lysosomal microenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

Lawrance S.K., Nucleic Acids Res. 13:7515-7528(1985).
Gustafsson K., J. Biol. Chem. 262:8778-8786(1987).
Young J.A., Hum. Immunol. 23:37-44(1988).<

Overview

Product Name	Anti-Hemopexin HPX Antibody
Reactive Species	Human
Description	Boster Bio Anti-Hemopexin HPX Antibody catalog # A02237-1. Tested in WB,ICC/IF,IHC,IP applications. This antibody reacts with Human.
Application	IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P02790

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Technical Details

Immunogen	Synthesized peptide derived from human HCN4 protein.
Predicted Reactive Species	Boar, Bovine, Canine, Golden Hamster
Isotype	IgG
Form	Liquid
Concentration	1 mg/ml
Purification	ProA affinity purified
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: WB: 1:500-1:2,000 ICC: 1:50-1:200 IHC: 1:100-1:500 IP: 1:10-1:50

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Anti-Hemopexin HPX Antibody (A02237-1) Images

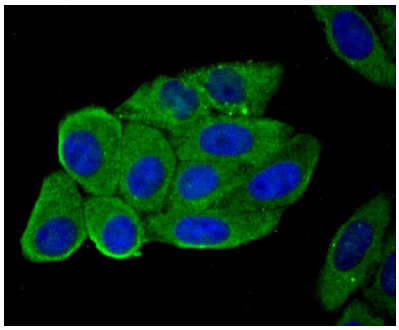

Figure 2. Immunocytochemistry staining of HPX using Anti-Hemopexin HPX Antibody (A02237-1).

ICC staining Hemopexin in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde

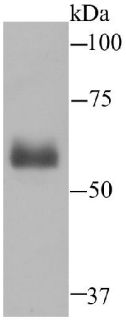

Figure 1. Western blotting validation for Anti-Hemopexin HPX Antibody A02237-1

Western blot analysis of Hemopexin on human plasma lysate using anti-Hemopexin antibody at 1/500 dilution. Electrophoresis was performed on a SDS-PAGE gel. To determine SDS-PAGE gel concentration