For Research Use Only

HMGB2 Monoclonal antibody

Catalog Number:68185-1-Ig Featured Product

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Basic Information

Catalog Number:
68185-1-Ig

Size:
1000 ug/ml

Source:
Mouse

Isotype:
IgG1

Immunogen Catalog Number:
AG7989

GenBank Accession Number:
BC000903

GeneID (NCBI):
3148

UNIPROT ID:
P26583

Full Name:
high-mobility group box 2

Calculated MW:
24 kDa

Observed MW:
24-28 kDa

Purification Method:
Protein G purification

CloneNo.:
1A7F10

Recommended Dilutions:
WB 1:5000-1:50000
IHC 1:500-1:2000

Applications

Tested Applications:
WB, IHC, ELISA

Species Specificity:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : LNCaP cells, HEK-293 cells, MCF-7 cells, HeLa cells, Jurkat cells, HSC-T6 cells, NIH/3T3 cells

IHC : human lung cancer tissue, mouse brain tissue, rat testis tissue

Background Information

High mobility group protein B2 (HMGB2) belongs to a family of highly conserved proteins that contain HMG box domains (11246022,14871457). All three family members (HMGB1, HMGB2, and HMGB3) contain two HMG box domains and a C-terminal acidic domain. HMGB1 is a widely expressed and highly abundant protein (14871457). HMGB2 is widely expressed during embryonic development, but it is restricted to lymphoid organs and testis in adult animals (11262228). HMGB3 is only expressed during embryogenesis (9598312). While expression varies, the biochemical properties of the different family members may be indistinguishable. The HMG box domains facilitate the binding of HMGB proteins to the minor groove of DNA, which results in local bending of the DNA double helix . HMGB proteins are recruited by and help facilitate the assembly of site-specific DNA binding proteins to their cognate binding sites in chromatin. For example, HMGB1 and HMGB2 facilitate the binding of Hox proteins, Oct proteins, p53, Rel proteins, and steroid hormone receptor proteins to their target gene promoters (11246022,14871457). Furthermore, HMGB2 interacts with RAG1 to facilitate RAG complex binding to the recombinant signal sequence (RSS) and stimulate DNA-bending and subsequent VDJ cleavage at antigen receptor genes (19317908 ,10490593). In addition to their functions in the nucleus, HMGB proteins play a significant role in extracellular signaling associated with inflammation. HMGB2 is secreted by myeloid cells and promotes proliferation and migration of endothelial cells by binding to the receptor for advanced glycation endproducts (RAGE) (19811285). Research studies have shown that HMGB2 overexpression in hepatocellular carcinoma is associated with poor prognosis and shorter survival time (20851854).The calculated molecular weight of HMGB2 is 24 kDa, and the post-modifiction of HMGB2 is about 33-35 kDa. (18218727)

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
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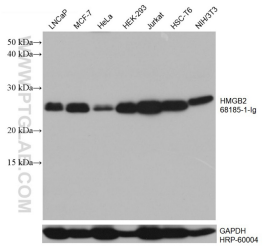
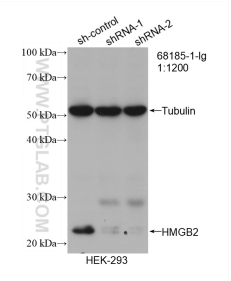
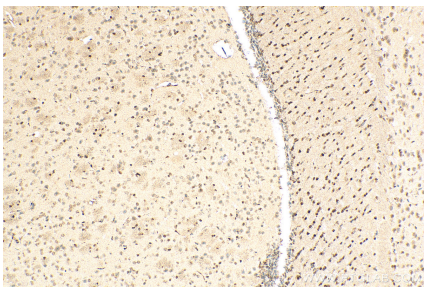
Selected Validation Data



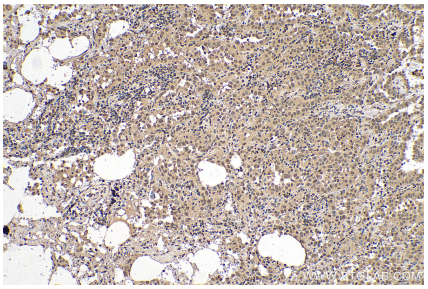
Various lysates were subjected to SDS PAGE followed by western blot with 68185-1-Ig (HMGB2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading control.



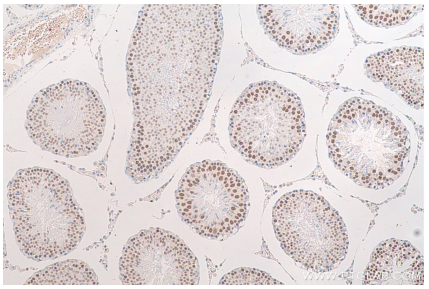
WB result of HMGB2 antibody (68185-1-Ig; 1:1200; incubated at room temperature for 1.5 hours) with sh-Control and sh-HMGB2 transfected HEK-293 cells.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 68185-1-Ig (HMGB2 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 68185-1-Ig (HMGB2 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat testis tissue slide using 68185-1-Ig (HMGB2 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).