For Research Use Only

HMGB2 Polyclonal antibody

Catalog Number:14597-1-AP Featured Product 21 Publications

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Basic Information

Catalog Number:
14597-1-AP

Size:
150ul , Concentration: 900 ug/ml by Nanodrop and 400 ug/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG6135

GenBank Accession Number:
BC001063

GeneID (NCBI):
3148

UNIPROT ID:
P26583

Full Name:
high-mobility group box 2

Calculated MW:
24 kDa

Observed MW:
33-35 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:3000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500
IF/ICC 1:200-1:800

Applications

Tested Applications:
WB, IF/ICC, IP, ELISA

Cited Applications:
WB, IF

Species Specificity:
human, mouse, rat

Cited Species:
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 : Jurkat cells, HEK-293 cells, HL-60 cells, human cerebellum tissue, K-562 cells

IP : HEK-293 cells,

IHC : mouse brain tissue,

IF/ICC : HepG2 cells,

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).This antibody recognizes the phosphorylation form of HMGB2 protein. The calculated molecular weight of HMGB2 is 24 kDa, but the post-modifiction of HMGB2 is about 33-35 kDa. (PMID: 18218727)

Notable Publications

Author	Pubmed ID	Journal	Application
Yiyong Wang	34699756	Eur J Pharmacol	WB
Guangfei Cui	30296520	Hum Pathol	WB
Kaiwen Zhang	34050127	Cell Death Dis	WB

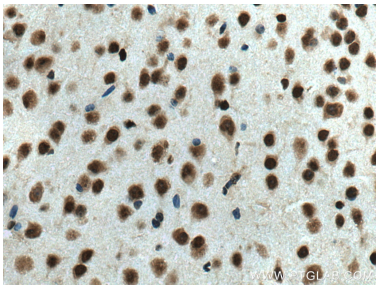
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

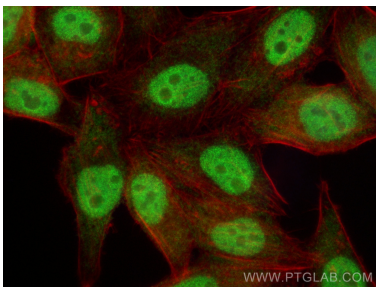
*** 20ul sizes contain 0.1% BSA

Selected Validation Data

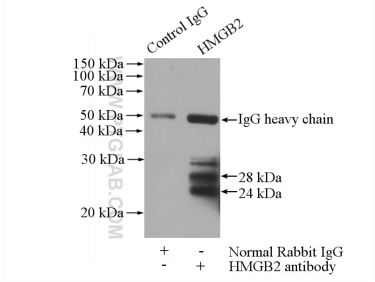
Jurkat cells were subjected to SDS PAGE followed by western blot with 14597-1-AP (HMGB2 antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 14597-1-AP (HMGB2 antibody) at dilution of 1:100 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using HMGB2 antibody (14597-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



IP result of anti-HMGB2 (IP:14597-1-AP, 4ug; Detection:14597-1-AP 1:500) with HEK-293 cells lysate 1200ug.