Data Sheet (Cat.No.TMPY-03283)

TargetMol

HBP1 Protein, Human, Recombinant (GST)

General Information

Synonyms:	HMG-box transcription factor 1
Protein Construction:	A DNA sequence encoding the mature form of human HBP1 (O60381-1) (Pro208-Phe345) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O60381-1
Molecular Weight:	42.5 kDa (predicted); 43 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

HBP1 is a sequence-specific DNA-binding transcription factor. It is involved in many biological processes. It was reported that HBP1 binds to p16(INK4A) promoter and activates p16(INK4A) expression. We found that trichostatin A (TSA), an inhibitor of HDAC (histone deacetylase), induces p16(INK4A) expression in an HBP1-dependent manner. HBP1 activates or represses the expression of some specific genes during cell growth and differentiation. HBP1 was acetylated by p3/CBP in two regions: repression domain (K297/35/37) and P domain (K171/419). HBP1

acetylation after TSA treatment was confirmed by immunoprecipitation assay. HBP1 interacted with histone acetyltransferase p3 and CREB-binding protein (CBP) and also recruited p3/CBP to p16(INK4A) promoter. HBP1 acetylation at K419 plays an important role in HBP1-induced p16(INK4A) expression.

Reference

Tevosian SG. et al., 1997, Genes Dev. 11 (3): 383-96.
Lavender P. et al., 1997, Oncogene. 14 (22): 2721-8.
Swanson. et al., 2004, Nat Struct Mol Biol. 11 (8): 738-46.