

CPTC-MGMT-1 (CAB080351)

Uniprot ID: [P16455](#)

Protein name: MGMT_HUMAN

Full name: Methylated-DNA--protein-cysteine methyltransferase

Function: Involved in the cellular defense against the biological effects of O6-methylguanine (O6-MeG) and O4-methylthymine (O4-MeT) in DNA. Repairs the methylated nucleobase in DNA by stoichiometrically transferring the methyl group to a cysteine residue in the enzyme. This is a suicide reaction: the enzyme is irreversibly inactivated.

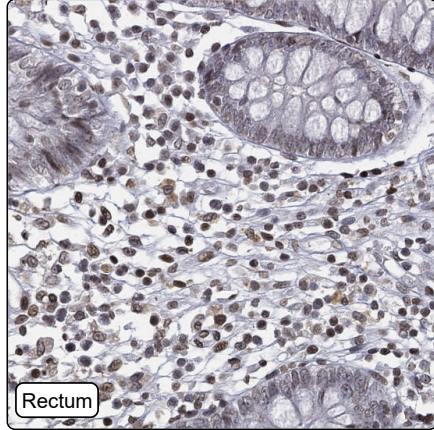
Subcellular location:

Nucleus

Protein existence: Experimental evidence at protein level

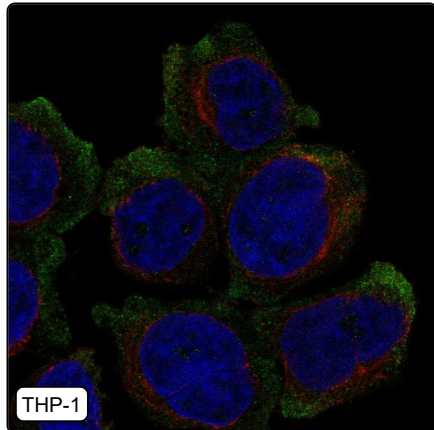
Comment:

Immunohistochemistry



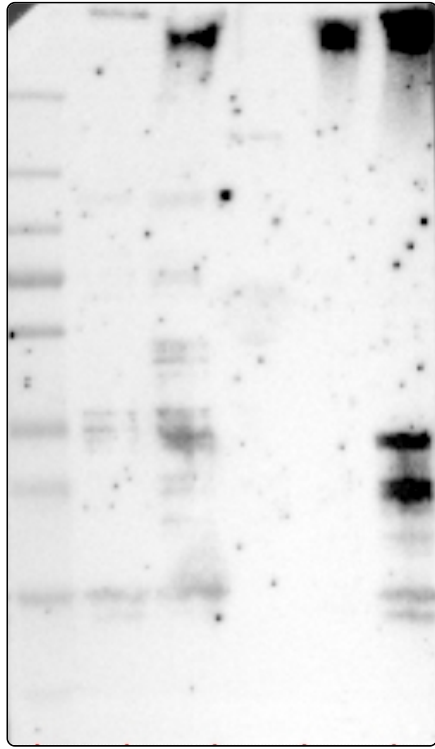
IHC protocol:	HIER pH6, Dilution 1:300
IHC test staining:	Nuclear positivity in a subset of immune cells in rectum and some positivity in glandular cells.
Literature conformance:	Consistent with extensive gene/protein characterization data
Literature significance:	
RNA similarity:	Very low consistency between antibody staining and RNA expression data
RNA tissue specificity:	Tissue enhanced (liver)
RNA tissue distribution:	Detected in all
IHC Sibling similarity:	Other antibody shows dissimilar IHC staining pattern

Immunofluorescence



IF Overlay:	antibody (green), anti-tubulin (red) and DAPI (blue)
IF main location:	Plasma membrane - 12: Uncertain (auto)
IF additional location:	Cytosol - 12: Uncertain (auto)
IF approved for publication on HPA:	No
IF in THP-1:	Plasma membrane (Edge)
IF in U2OS:	Plasma membrane Cytosol

Western blot



WB Size markers (kDa):	250, 130, 100, 70, 55, 35, 25, 15, 10
WB Lanes:	Marker (1), RT-4 (2), U-251MG (3), Plasma (4), Liver (5), Tonsil (6)
WB Target weight (kDa):	22, 25
WB Validation:	Supported (Band of predicted size in kDa (+/-20%) with additional bands present.)