Serine/threonine-protein phosphatase 2A regulatory subunit B'

UniProt
Function: PPIases accelerate the folding of proteins. It catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides. Acts as a regulatory subunit for serine/threonine-protein phosphatase 2A (PP2A) modulating its activity or substrate specificity, probably by inducing a conformational change in the catalytic subunit, a proposed direct target of the PPIase. Can reactivate inactive phosphatase PP2A-phosphatase methylesterase complexes (PP2A(i)) in presence of ATP and Mg(2+) (By similarity). Reversibly stimulates the variable phosphotyrosyl phosphatase activity of PP2A core heterodimer PP2A(D) in presence of ATP and Mg(2+) (in vitro). The phosphotyrosyl phosphatase activity is dependent of an ATPase activty of the PP2A(D):PPP2R4 complex. Is involved in apoptosis; the function appears to be independent from PP2A.
Subcellular location: Cytoplasm. Nucleus.
Tissue specificity: Widely expressed.

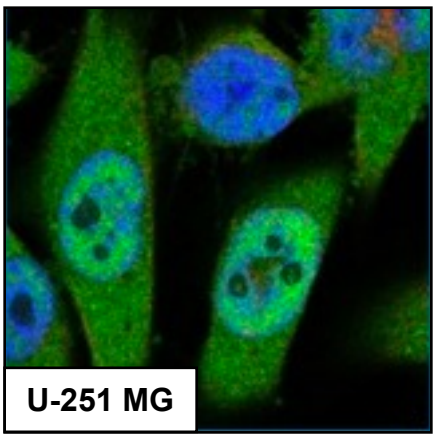
Four antibodies: PP2A-1, PP2A-2, PP2A-3 and PP2A-4 were tested and 3 antibodies were approved for IHC. PP2A-1 was selected for full protein profiling.

PP2A-1 (CAB035999)

Immunohistochemistry

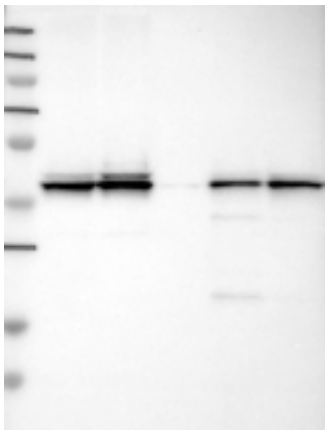
IHC protocol: HIER pH 6, Dilution 1:1600
IHC test staining: Widely expressed cytoplasmic staining. Strong staining was seen in e.g. testis, kidney, pancreas and fallopian tube. Some nuclear staining can also be seen.

IHC Annotators comments
Moderate to strong cytoplasmic and/or nuclear positivity was observed in normal and cancer tissues. Hepatocytes were weakly stained.



Immunofluorescence

IF Overlay: antibody (green), anti-tubuline (red) and DAPI (blue)
IF Localisation: Staining of nuclei but not nucleoli in U-251 Mg and A-431 with additional staining of cytoplasm in U-251 MG. Staining of cytoskeleton (microtubules) in U-2 OS.
IF Validation: Subcellular localization partly supported by literature or where no literature is available.



Western blot

WB Size markers (kDa): 230, 130, 95, 72, 56, 36, 28, 17, 11
WB Lanes: Marker(1), RT-4(2), U251 MG(3), Plasma(4), Liver(5), Tonsil(6)
WB Target weight (kDa): 37, 32, 30, 29, 28, 24, 19, 15, 14, 12, 7
WB Validation: Supportive (Band of predicted size in kDa (+/-20%) with additional bands present)