

Mitogen-activated protein kinase 14

UniProt

Function: Responds to activation by environmental stress, pro-inflammatory cytokines and lipopolysaccharide (LPS) by phosphorylating a number of transcription factors, such as ELK1 and ATF2 and several downstream kinases, such as MAPKAPK2 and MAPKAPK5. Plays a critical role in the production of some cytokines, for example IL-6. May play a role in stabilization of EPO mRNA during hypoxic stress. Isoform Mxi2 activation is stimulated by mitogens and oxidative stress and only poorly phosphorylates ELK1 and ATF2. Isoform Exip may play a role in the early onset of apoptosis.

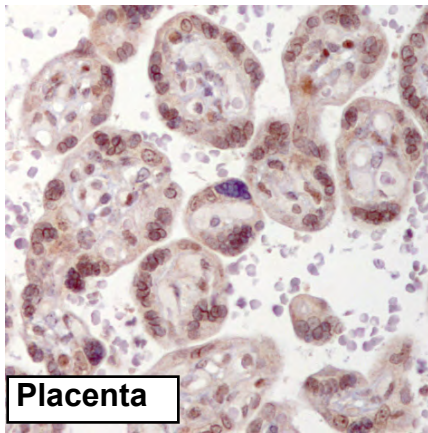
Subcellular location: Cytoplasm (by similarity). Nucleus (by similarity).

Tissue specificity: Brain, heart, placenta, pancreas and skeletal muscle. Expressed to a lesser extent in lung, liver and kidney.

Three antibodies: MAPK14-1, MAPK14-2 and MAPK14-3 were tested. MAPK14-1 and MAPK14-2 were approved for IHC. MAPK14-1 was selected for full protein profiling.

MAPK14-3 (CAB040580)

Failed for IHC



Immunohistochemistry

IHC protocol: HIER pH 6, Dilution 1:50

IHC test staining: Ubiquitous cytoplasmic and nuclear staining. High expression in, eg pancreas, testes and placenta.



Western blot

WB Size markers (kDa): 250, 130, 95, 72, 55, 36, 28, 17, 11

WB Lanes: Marker(1), RT-4(2), U251 MG(3), Plasma(4), Liver(5), Tonsil(6)

WB Target weight (kDa): 41, 35, 32, 20, 16, 10

WB Validation: Supportive - High specificity (no other antigen with signal >15%).