UBA1-1

Uniprot ID: P22314
Protein name: UBA1_HUMAN
Full name: Ubiquitin-like modifier-activating enzyme 1
Protein existence: evidence at protein level
Function: Catalyzes the first step in ubiquitin conjugation to mark cellular proteins for degradation through the ubiquitin-proteasome system. Activates ubiquitin by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this residue to the side chain of a cysteine residue in E1, yielding a ubiquitin-E1 thioester and free AMP. Essential for the formation of radiation-induced foci, timely DNA repair and for response to replication stress. Promotes the recruitment of TP53BP1 and BRCA1 at DNA damage sites.

Three antibodies: UBA1-1, UBA1-2 and UBA1-3 were tested. UBA1-1 was selected for full protein profiling.

UBA1-1 (CAB073410)

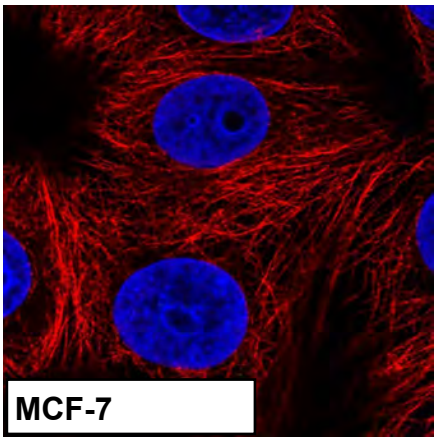
OK

Immunohistochemistry

IHC protocol: HIER pH 6, Dilution 1:4000
IHC test staining: Nuclear staining in several tissues, most prominent in fallopian tube, tonsil, testis and placenta along with some weak cytoplasmic positivity.

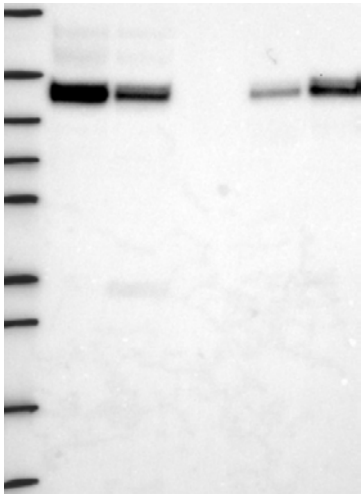
IHC Annotators comments
Normal tissues showed moderate to strong nuclear staining. Intestinal tract, breast, fallopian tube and gall bladder displayed additional distinct luminal membranous staining.

Cancer tissues showed moderate to strong nuclear staining. Few cases of colorectal, endometrial and testis cancers displayed additional luminal membranous positivity. Several prostate cancers were negative.



Immunofluorescence

IF Overlay: antibody (green), anti-tubuline (red) and DAPI (blue)
IF Localization: Negative IF staining in all tested cell lines
IF Validation: The subcellular location is not supported by literature.



Western blot

WB Size markers (kDa): 250, 130, 95, 72, 55, 36, 28, 17, 10
WB Lanes: Marker(1), RT-4(2), U251 MG(3), Plasma(4), Liver(5), Tonsil(6)
WB Target weight (kDa): 117.8, 56.9, 30.8, 29.2, 25.1, 20.7, 18.6
WB Validation: Supportive: Single band corresponding to the predicted size in kDa (+/-20%)