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ATR Antibody
Catalog # ASC10188

Specification

ATR Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q9H6X2
Other Accession	NP_444262, 16933551
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 36, 40, 60 kDa** **Observed: 45 kDa KDa**
Application Notes	**ATR antibody can be used for detection of ATR by Western blot at 0.5 to 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2 µg/mL. For immunofluorescence start at 10 µg/mL.**

ATR Antibody - Additional Information

Gene ID	**84168**

Other Names
ATR Antibody: ATR, GAPO, TEM8, ATR, Anthrax toxin receptor 1, Tumor endothelial marker 8, anthrax toxin receptor 1

Target/Specificity
ANTXR1; At least three isoforms of ATR are known to exist; this antibody will detect all three isoforms.

Reconstitution & Storage
ATR antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
ATR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATR Antibody - Protein Information

Name ANTXR1 {ECO:0000303|PubMed:22912819, ECO:0000312|HGNC:HGNC:21014}

Function
Plays a role in cell attachment and migration. Interacts with extracellular matrix proteins and with the actin cytoskeleton. Mediates adhesion of cells to type 1 collagen and gelatin, reorganization of the actin cytoskeleton and promotes cell spreading. Plays a role in the angiogenic response of

cultured umbilical vein endothelial cells.

Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell projection, lamellipodium membrane; Single-pass type I membrane protein. Cell projection, filopodium membrane; Single- pass type I membrane protein. Note=At the membrane of lamellipodia and at the tip of actin-enriched filopodia (PubMed:16762926). Colocalizes with actin at the base of lamellipodia (PubMed:16762926).

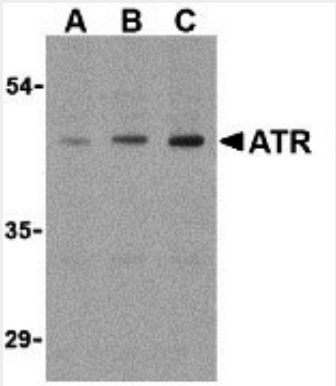
Tissue Location
Detected in umbilical vein endothelial cells (at protein level). Highly expressed in tumor endothelial cells

ATR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ATR Antibody - Images



Western blot analysis of ATR in HepG2 cell lysates with ATR antibody (IN) at (A) 0.5, (B) 1, and (C) 2 µg/mL.

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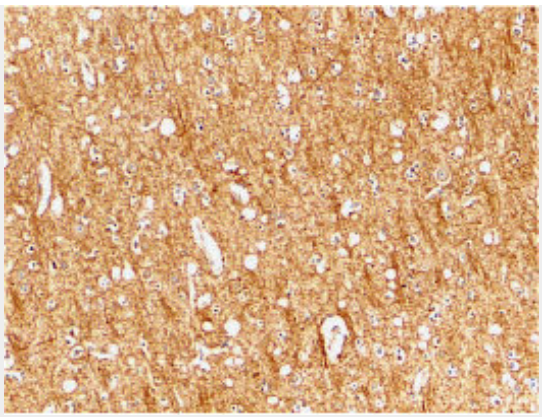
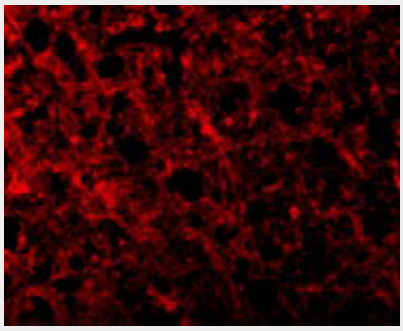


Immunohistochemical staining of human brain tissue using ATR antibody at 2 µg/mL.



Immunofluorescence of ATR in Human Brain tissue with ATR antibody at 10 ug/mL.

ATR Antibody - Background

ATR Antibody: The Anthrax toxin receptor (ATR) was initially discovered as the tumor endothelial marker 8 (TEM8). This protein, which exists in three isoforms (36, 40, and 60 kDa), is highly expressed in tumor vessels as well as in the vasculature of developing embryos, suggesting that it may normally play a role in angiogenesis. However, it also acts as the receptor for anthrax toxin. Following the binding of this protein by the protective antigen (PA) of anthrax, PA is cleaved and heptamerizes to form the binding site for both edema factor (EF) and lethal factor (LF). This complex is then endocytosed by the cell; acidification in endosomes allows the release of EF and LF into the cytoplasm where they interfere with MAPK signaling and induce apoptosis.

ATR Antibody - References

Carson-Walter EB, Watkins DN, Nanda A, et al. Cell surface tumor endothelial markers are conserved in mice and humans. Can. Res. 2001; 61:6649-6655.
Bradley KA, Mogridge J, Mourez M, et al. Identification of the cellular receptor for anthrax toxin. Nature 2001; 414:225-9.
Molloy S, Bresnahan PA, Thomas G, et al. Human furin is a calcium-dependent serine endoprotease that recognizes the sequence Arg-X-X-Arg and efficiently cleaves anthrax toxin protective antigen. J. Biol. Chem. 1992; 267:16396-402.
Duesbery N, Webb C, Vande Woude G, et al. Proteolytic inactivation of MAP-kinase-kinase by anthrax lethal factor. Science 1998; 280:734-6.