

IHCeasy ATR Ready-To-Use IHC Kit

Catalog Number: **KHC2431**

General Information

Sample type:
FFPE tissue
Cited sample type:
Reactivity:
Human, Mouse, Rat
Cited Reactivity:

Assay type:
Immunohistochemistry
Primary antibody type:
Rabbit Polyclonal
Secondary antibody type:
Polymer-HRP-Goat anti-Rabbit

Kit Component

Component	Size	Concentration
Antigen Retrieval Buffer	100 mL	50×
Washing Buffer	100 mL × 2	20×
Blocking Buffer	5 mL	RTU
Primary Antibody	5 mL	RTU
Secondary Antibody	5 mL	RTU
Chromogen Component A	0.2 mL	RTU
Chromogen Component B	4 mL	RTU
Signal Enhancer	5 mL	RTU
Counter Staining Reagent	5 mL	RTU
Mounting Media	5 mL	RTU
Control Slide	1 slide (Optional)	FFPE
Datasheet	1 Copy	
Manual	1 Copy	

Storage Instructions

All the reagents are stored at 2-8°C. The kit is stable for 6 months from the date of receipt.

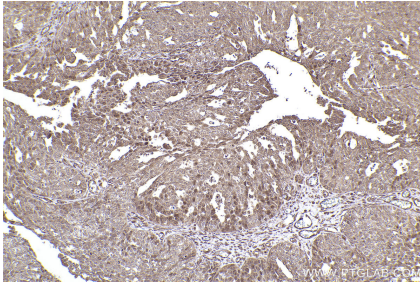
Background

ATR, also named as FRP1, belongs to the PI3/PI4-kinase family and ATM subfamily. ATR is a serine/threonine protein kinase which activates checkpoint signaling upon genotoxic stresses such as ionizing radiation (IR), ultraviolet light (UV), or DNA replication stalling, thereby acting as a DNA damage sensor. ATR recognizes the substrate consensus sequence [ST]-Q. ATR phosphorylates BRCA1, CHEK1, MCM2, RAD17, RPA2, SMC1 and TP53/p53, which collectively inhibit DNA replication and mitosis and promote DNA repair, recombination and apoptosis. ATR phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at sites of DNA damage, thereby regulating DNA damage response mechanism. It is required for FANCD2 ubiquitination. It is critical for maintenance of fragile site stability and efficient regulation of centrosome duplication. ATR catalyze the reaction: ATP + a protein = ADP + a phosphoprotein. Defects in ATR are a cause of Seckel syndrome type 1 (SCKL1) which is a rare autosomal recessive disorder characterized by growth retardation, microcephaly with mental retardation, and a characteristic 'bird-headed' facial appearance.

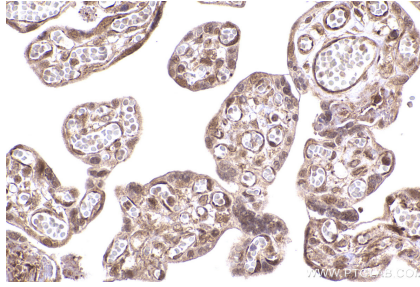
Synonyms

ATR, Ataxia telangiectasia and Rad3-related protein

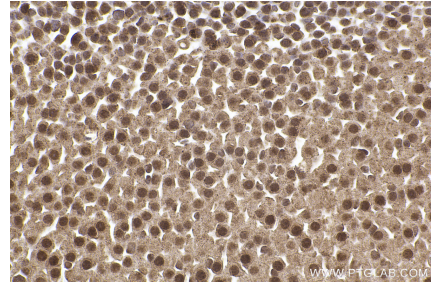
Selected Validation Data



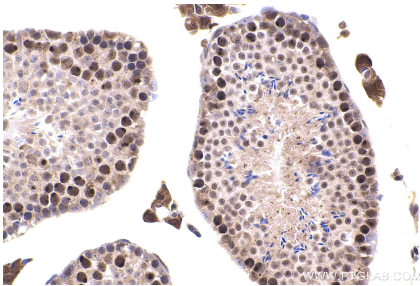
Immunohistochemical analysis of paraffin-embedded human ovary cancer tissue slide using KHC2431 (ATR IHC Kit).



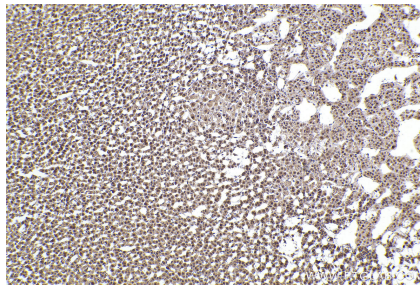
Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using KHC2431 (ATR IHC Kit).



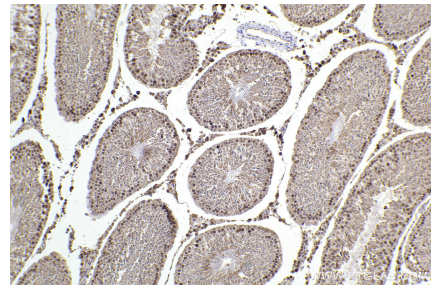
Immunohistochemical analysis of paraffin-embedded mouse adrenal gland tissue slide using KHC2431 (ATR IHC Kit).



Immunohistochemical analysis of paraffin-embedded mouse testis tissue slide using KHC2431 (ATR IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat adrenal gland tissue slide using KHC2431 (ATR IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat testis tissue slide using KHC2431 (ATR IHC Kit).