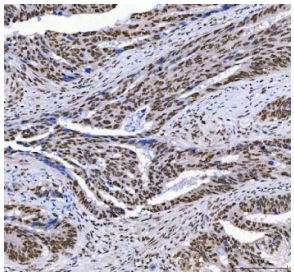
Aryl Hydrocarbon Receptor Repressor Antibody / AHRR (RQ8461)

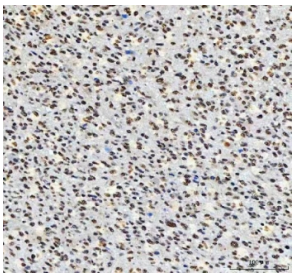
Catalog No.	Formulation	Size
RQ8461	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

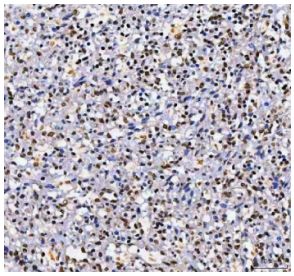
Availability	1-3 days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A9YTQ3
Localization	Nuclear, cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This Aryl Hydrocarbon Receptor Repressor antibody is available for research use only.



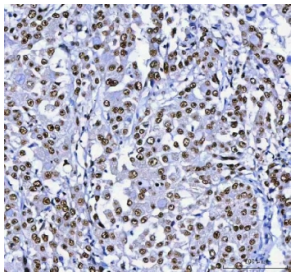
IHC staining of FFPE human colorectal adenocarcinoma tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



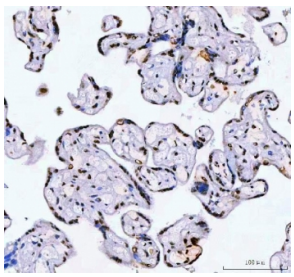
IHC staining of FFPE human glioma tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



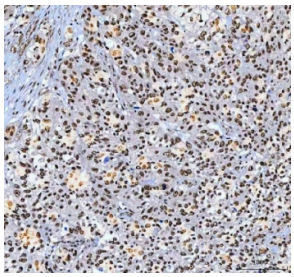
IHC staining of FFPE human spleen tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



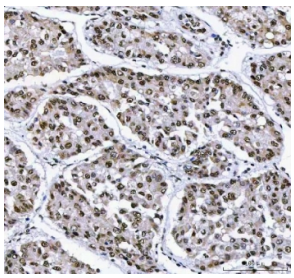
IHC staining of FFPE human lung cancer tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



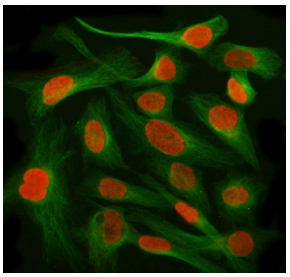
IHC staining of FFPE human placental tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



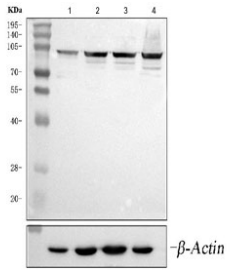
IHC staining of FFPE human bladder urothelial carcinoma tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



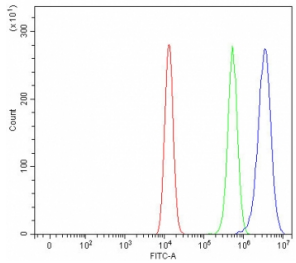
IHC staining of FFPE human liver cancer tissue with Aryl Hydrocarbon Receptor Repressor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human HeLa cells with Aryl Hydrocarbon Receptor Repressor antibody (red) and Beta Tubulin mAb (green). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of human 1) ThP-1, 2) HeLa, 3) SiHa and 4) HEL cell lysate with Aryl Hydrocarbon Receptor Repressor antibody and Beta Actin loading control antibody. Predicted molecular weight: 76-78 kDa.



Flow cytometry testing of fixed and permeabilized human HEL cells with Aryl Hydrocarbon Receptor Repressor antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Aryl Hydrocarbon Receptor Repressor antibody.

Description

Aryl Hydrocarbon Receptor Repressor antibody targets Aryl hydrocarbon receptor repressor, encoded by the AHRR gene. Aryl hydrocarbon receptor repressor is a nuclear and cytoplasmic protein belonging to the basic helix-loop-helix PAS family of transcriptional regulators. It functions primarily as a feedback inhibitor of aryl hydrocarbon receptor signaling by competing with AHR for binding partners and regulatory DNA elements, thereby restraining pathway activation following ligand stimulation.

Aryl hydrocarbon receptor repressor plays a critical role in maintaining homeostasis within the aryl hydrocarbon receptor signaling cascade, which governs cellular responses to environmental xenobiotics, endogenous metabolites, and dietary ligands. Upon activation of AHR, transcription of AHRR is induced, establishing a negative feedback loop that limits excessive or prolonged transcriptional responses. An Aryl Hydrocarbon Receptor Repressor antibody supports studies focused on transcriptional regulation, environmental response pathways, and feedback control mechanisms.

AHRR expression is detected across a range of tissues, with notable relevance in immune cells, epithelial compartments, and developmental contexts. Its expression pattern often reflects prior or ongoing AHR pathway activation, consistent with its role as an inducible suppressor rather than a constitutively active transcription factor. Subcellular localization of Aryl hydrocarbon receptor repressor is predominantly nuclear, aligning with its transcriptional repressive function, although cytoplasmic localization can also be observed depending on cell type and signaling state.

From a disease relevance perspective, dysregulation of Aryl hydrocarbon receptor repressor has been associated with cancer, immune-related disorders, and environmentally influenced disease processes. Reduced expression or epigenetic silencing of AHRR can impair normal feedback inhibition of AHR signaling, resulting in sustained transcriptional activity that may promote abnormal proliferation, altered differentiation, or inflammatory signaling. These observations highlight AHRR as an important regulatory checkpoint in environmentally responsive transcriptional networks.

At the molecular level, Aryl hydrocarbon receptor repressor contains conserved PAS domains that mediate protein-protein

interactions required for transcriptional repression. Its functional behavior can be influenced by cellular context, interaction partners, and post-translational regulatory mechanisms, which may affect experimental readouts without altering the underlying protein sequence. Aryl Hydrocarbon Receptor Repressor antibody reagents support research into transcriptional repression and xenobiotic response signaling, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the Aryl Hydrocarbon Receptor Repressor antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (amino acids K410-D665) was used as the immunogen for the Aryl Hydrocarbon Receptor Repressor antibody.

Storage

After reconstitution, the Aryl Hydrocarbon Receptor Repressor antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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