10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# RAI1 Rabbit pAb

RAI1 Rabbit pAb
Catalog # AP54679

## Product Information

| | |
|---|---|
| **Application** | WB, IHC-P, IHC-F, IF |
| **Primary Accession** | Q7Z5J4 |
| **Predicted** | Rat, Human, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 203352 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human RAI1 |
| **Epitope Specificity** | 421-520/1906 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Cytoplasmic and Nuclear. In neurons it is localized to neurites. |
| **DISEASE** | Defects in RAI1 are a cause of Smith-Magenis syndrome (SMS) [MIM:182290]. SMS is characterized by congenital mental retardation associated with development and growth delays. Affected persons have characteristic behavioral abnormalities, including self-injurious behaviors and sleep disturbance, and distinct craniofacial and skeletal anomalies. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | Retinoic acid induced 1 (RAI1) is a 1,906 amino acid protein containing an N-terminal polyglutamine stretch that is expressed in most tissues, with highest expression in neuronal tissues. RAI1 functions as a transcriptional regulator and is important for embryonic and postnatal developments. Heterozygous deletions of the RAI1 gene are associated with Smith-Magenis syndrome (SMS), a mental retardation syndrome with behavioral, neurological and skeletal anomalies. Individuals affected with SMS usually display self-injurious behaviors, sleep disturbance, developmental delay and reduced motor and cognitive skills. RAI1 haploinsufficiency is specifically responsible for the obesity and craniofacial symptoms of SMS. RAI1 mutations have also been implicated in schizophrenia and spinocerebellar ataxia type 2. |

## Additional Information

| | |
|---|---|
| **Gene ID** | 10743 |
| **Other Names** | Retinoic acid-induced protein 1, RAI1, KIAA1820 |
| **Dilution** | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |

| | |
|---|---|
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

| | |
|---|---|
| **Name** | RAI1 |
| **Synonyms** | KIAA1820 |
| **Function** | Transcriptional regulator of the circadian clock components: CLOCK, BMAL1, BMAL2, PER1/3, CRY1/2, NR1D1/2 and RORA/C. Positively regulates the transcriptional activity of CLOCK a core component of the circadian clock. Regulates transcription through chromatin remodeling by interacting with other proteins in chromatin as well as proteins in the basic transcriptional machinery. May be important for embryonic and postnatal development. May be involved in neuronal differentiation. |
| **Cellular Location** | Cytoplasm. Nucleus. Note=In neurons, localized to neurites. |
| **Tissue Location** | Expressed in all tissues examined with higher expression in the heart and brain. No expression was seen in the corpus callosum of the brain. |

## Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.