



Rabbit Anti-RAI1 antibody

SL11940R

Product Name RAI1**Chinese Name** 维甲酸诱导蛋白 1 抗体**Alias** DKFZP434A139; KIAA1820; MGC12824; retinoic acid induced 1; Retinoid acid induced prote SMS; RAI1_HUMAN.**Research Area** Neurobiology transcriptional regulatory factor**Immunogen Species** Rabbit**Clonality** Polyclonal**React Species** (predicted: Human, Mouse, Rat,)
WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA
(Paraffin sections need antigen repair)
Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.**Theoretical molecular weight** 203kDa**Cellular localization** The nucleus cytoplasmic**Form** Liquid**Concentration** 1mg/ml**immunogen** KLH conjugated synthetic peptide derived from human RAI1: 421-520/1906**Lsotype** IgG**Purification** affinity purified by Protein A**Buffer Solution** 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.**Attention** This product as supplied is intended for research use only, not for use in human, therapeutic or d applications.**PubMed** [PubMed](#)**Product** Retinoic acid induced 1 (RAI1) is a 1,906 amino acid protein containing an N-terminal polyglutan

Detail

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 RAI1 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.

Function:

RAI1 (retinoid-acid induced protein 1) may be involved in neuronal differentiation. RAI1 is highly homologous to its mouse counterpart and is expressed at high levels mainly in neuronal tissues. RAI1 has a polymorphic polyglutamine tract in its N-terminal domain. Expression of the mouse counterpart in neurons is induced by retinoic acid. The RAI1 gene is associated with both the severity of the phenotype and the response to treatment in schizophrenic patients. Defects in RAI1 are a cause of Smith-Magenis syndrome (SMS). There are two isoforms.

Subcellular Location:

Cytoplasmic and Nuclear. In neurons it is localized to neurites.

Tissue Specificity:

Expressed in all tissues examined with higher expression in the heart and brain. No expression was detected in the corpus callosum of the brain.

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 exhibit characteristic behavioral abnormalities, including self-injurious behaviors and sleep disturbance, craniofacial and skeletal anomalies.

Similarity:

Contains 1 PHD-type zinc finger.

SWISS:

Q7Z5J4

Gene ID:

10743

Database links:

[Entrez Gene: 10743](#) Human

[Omim: 607642](#) Human



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[SwissProt: Q7Z5J4](#) Human

[Unigene: 655395](#) Human