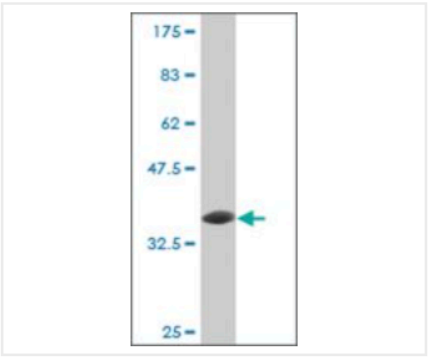
SAB1404508 Sigma-Aldrich

Monoclonal Anti-UBE3A antibody produced in mouse

clone 3E5, purified immunoglobulin, buffered aqueous solution

Synonym: **ANCR, AS, E6-AP, EPVE6AP, FLJ26981, HPVE6A**

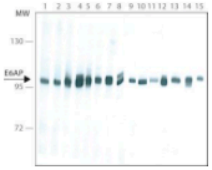


SDS Certificate of Analysis (COA)

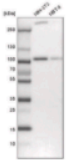
SKU-Pack Size	Availability	Pack Size	Price (USD)	Quantity
SAB1404508-100UG	Available to ship on 01/05/21 - FROM	100 µg	424.00	0

Bulk orders? ADD TO CART

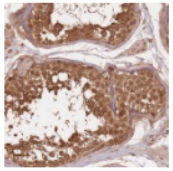
Product Recommendations



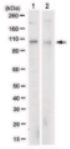
E8655
Sigma-Aldrich
Anti-E6AP antibody, Mouse monoclonal
clone E6AP-330, purified from hybridoma cell culture



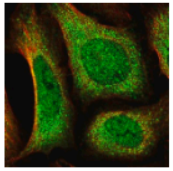
HPA039410
Sigma-Aldrich
Anti-UBE3A antibody produced in rabbit
Prestige Antibodies® Powered by Atlas Antibo...



HPA040380
Sigma-Aldrich
Anti-UBE3A antibody produced in rabbit
Prestige Antibodies® Powered by Atlas Antibo...



MABS1683
Sigma-Aldrich
Anti-UBE3A Antibody, clone 10H7.1
Anti-UBE3A, clone 10H7.1, Cat. No. MABS1683, is a mouse...



HPA058106
Sigma-Aldrich
Anti-DOCK10 antibody produced in rabbit
Prestige Antibodies® Powered by Atlas Antibo...

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Properties

Related Categories	Alphabetical Index, Antibodies, Primary Antibodies, U1-UG
conjugate	**unconjugated**
clone	**3E5, monoclonal**
biological source	**mouse**
application(s)	**indirect ELISA: suitable**
	western blot: 1-5 µg/mL
species reactivity	**human**
mol wt	**antigen ~37.11 kDa**
form	**buffered aqueous solution**
shipped in	**dry ice**
storage temp.	**−20°C**
antibody form	**purified immunoglobulin**
isotype	**IgG2aκ**
Quality Level	100
antibody product type	**primary antibodies**
NCBI accession no.	BC009271
UniProt accession no.	Q05086
Gene Information	**human ...** UBE3A**(7337)**

Description

General description
This gene encodes an E3 ubiquitin-protein ligase, part of the ubiquitin protein degradation system. This imprinted gene is maternally expressed in brain and biallelically expressed in other tissues. Maternally inherited deletion of this gene causes Angelman Syndrome, characterized by severe motor and intellectual retardation, ataxia, hypotonia, epilepsy, absence of speech, and characteristic facies. The protein also interacts with the E6 protein of human papillomavirus types 16 and 18, resulting in ubiquitination and proteolysis of tumor protein p53. Alternative splicing of this gene results in three transcript variants encoding three isoforms with different N-termini. Additional transcript variants have been described, but their full length nature has not been determined. (provided by RefSeq)

Immunogen
UBE3A (AAH09271, 51 a.a. ~ 150 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Sequence
ETFQQLITYKVISNEFNSRNLVNDDDAIVAASKCLKMVYYANVVGGEVDT
NHNEEDDEEPIPESSELTLQELLGEERRNKKGPRVDPLETELGVKTLDCR

Application
Applications in which this antibody has been used successfully, and the associated peer-reviewed papers, are given below.
Immunofluorescence (1 paper)
Immunohistochemistry (1 paper)

Physical form
Solution in phosphate buffered saline, pH 7.4

Disclaimer
Unless otherwise stated in our catalog or other company documentation accompanying the product(s), our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans or animals.

Safety Information

RIDADR	NONH for all modes of transport
WGK Germany	WGK 1
Flash Point(F)	Not applicable
Flash Point(C)	Not applicable

Documents

Certificate of Analysis (COA)

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SDS
Specification Sheet
Antibody Explorer

Protocols & Articles

Articles

Antibody Basics

Immunoglobulins (Igs) are produced by B lymphocytes and secreted into plasma. The Ig molecule in monomeric form is a glycoprotein with a molecular weight of approximately 150 kDa that is shaped more ...
Keywords: Affinity chromatography, Centrifugation, Chromatography, Digestions, Direct immunofluorescence, Gene expression, High performance liquid chromatography, Immunofluorescence, Ion Exchange, Microscopy, Precipitation, Purification, Rheumatology, Scanning electron microscopy

Protocols

Western Blot Protocol | Immunoblotting Protocol

Western Blotting refers to the electrophoretic transfer of proteins from sodium dodecyl sulfate polyacrylamide gels to sheets of PVDF or nitrocellullose membrane, followed by immunodetection of prote...
Keywords: AGE, Buffers, Cell disruption, Detection methods, Detergents, Dialysis, Electroblotting, Electrophoresis, Enzyme activity, Gel electrophoresis, Immunoprecipitation, PAGE, Protein extraction, Purification, Sample preparations, Western blot

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Peer-Reviewed Papers

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Maternal Ube3a Loss Disrupts Sleep Homeostasis But Leaves Circadian Rhythmicity Largely Intact.

Read Abstract

J Christopher Ehlen et. al

The Journal of neuroscience : the official journal of the Society for Neuroscience, 35(40), 13587-13598 (2015-10-9)

Individuals with Angelman syndrome (AS) suffer sleep disturbances that severely impair quality of life. Whether these disturbances arise from sleep or circadian clock dysfunction is currently unknown. Here, we explored the mechanistic basis for these...Read More

Persistent neuronal Ube3a expression in the suprachiasmatic nucleus of Angelman syndrome model mice.

Read Abstract

Kelly A Jones et. al

Scientific reports, 6, 28238 (2016-6-17)

Mutations or deletions of the maternal allele of the UBE3A gene cause Angelman syndrome (AS), a severe neurodevelopmental disorder. The paternal UBE3A/Ube3a allele becomes epigenetically silenced in most neurons during postnatal development in humans...Read More

Loss of UBE3A from TH-expressing neurons suppresses GABA co-release and enhances VTA-NAc optical self-stimulation.

Read Abstract

Janet Berrios et. al

Nature communications, 7, 10702 (2016-2-13)

Motivated reward-seeking behaviours are governed by dopaminergic ventral tegmental area projections to the nucleus accumbens. In addition to dopamine, these mesoaccumbal terminals co-release other neurotransmitters including glutamate and GABA, whose...Read More

Enhanced Nociception in Angelman Syndrome Model Mice.

Read Abstract

Eric S McCoy et. al

The Journal of neuroscience : the official journal of the Society for Neuroscience, 37(42), 10230-10239 (2017-9-22)

Angelman syndrome (AS) is a severe neurodevelopmental disorder caused by mutation or deletion of the maternal UBE3A allele. The maternal UBE3A allele is expressed in nearly all neurons of the brain and spinal cord, whereas the paternal UBE3A allele i...Read More

Subcellular organization of UBE3A in neurons.

Read Abstract

Alain C Burette et. al

The Journal of comparative neurology, 525(2), 233-251 (2016-6-25)

Ubiquitination regulates a broad array of cellular processes, and defective ubiquitination is implicated in several neurological disorders. Loss of the E3 ubiquitin-protein ligase UBE3A causes Angelman syndrome. Despite its clinical importance, the n...Read More

Enhanced Operant Extinction and Prefrontal Excitability in a Mouse Model of Angelman Syndrome.

Read Abstract

Michael S Sidorov et. al

The Journal of neuroscience : the official journal of the Society for Neuroscience, 38(11), 2671-2682 (2018-2-13)

Angelman syndrome (AS), a neurodevelopmental disorder associated with intellectual disability, is caused by loss of maternal allele expression of UBE3A in neurons. Mouse models of AS faithfully recapitulate disease phenotypes across multiple domains,...Read More

Subcellular organization of UBE3A in human cerebral cortex.

Read Abstract

Alain C Burette et. al

Molecular autism, 9, 54 (2018-10-27)

Loss of UBE3A causes Angelman syndrome, whereas excess UBE3A activity appears to increase the risk for autism. Despite this powerful association with neurodevelopmental disorders, there is still much to be learned about UBE3A, including its cellular ...Read More

Local axonal morphology guides the topography of interneuron myelination in mouse and human neocortex.

Read Abstract

Jeffrey Stedehouder et. al

eLife, 8, undefined (2019-11-20)

GABAergic fast-spiking parvalbumin-positive (PV) interneurons are frequently myelinated in the cerebral cortex. However, the factors governing the topography of cortical interneuron myelination remain incompletely understood. Here, we report that seg...Read More

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