

Product datasheet

Anti-Connexin 43 / GJA1 antibody ab230537

[1 References](#) [3 Images](#)

Overview

Product name	Anti-Connexin 43 / GJA1 antibody
Description	Rabbit polyclonal to Connexin 43 / GJA1
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Human Connexin 43/ GJA1 (C terminal) conjugated to keyhole limpet haemocyanin. Database link: P17302
Positive control	WB: C6, HeLa and C2C12 whole cell lysate; mouse heart and rat brain tissue lysate. IHC-P: Human heart tissue. ICC/IF: HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.30 Preservative: 0.01% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab230537 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/100 - 1/500.
IHC-P		1/100. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		1/500 - 1/1000. Predicted molecular weight: 43 kDa.

Target

Function

One gap junction consists of a cluster of closely packed pairs of transmembrane channels, the connexons, through which materials of low MW diffuse from one cell to a neighboring cell. May play a critical role in the physiology of hearing by participating in the recycling of potassium to the cochlear endolymph.

Tissue specificity

Expressed in the heart and fetal cochlea.

Involvement in disease

Defects in GJA1 are the cause of autosomal dominant oculodentodigital dysplasia (ODDD) [MIM:164200]; also known as oculodentoosseous dysplasia. ODDD is a highly penetrant syndrome presenting with craniofacial (ocular, nasal, dental) and limb dysmorphisms, spastic paraplegia, and neurodegeneration. Craniofacial anomalies typically include a thin nose with hypoplastic alae nasi, small anteverted nares, prominent columnella, and microcephaly. Brittle nails and hair abnormalities of hypotrichosis and slow growth are present. Ocular defects include microphthalmia, microcornea, cataracts, glaucoma, and optic atrophy. Syndactyly type 3 and conductive deafness can occur in some cases. Cardiac abnormalities are observed in rare instances.

Defects in GJA1 are the cause of autosomal recessive oculodentodigital dysplasia (ODDD autosomal recessive) [MIM:257850].

Defects in GJA1 may be the cause of syndactyly type 3 (SDTY3) [MIM:186100]. Syndactyly is an autosomal dominant trait and is the most common congenital anomaly of the hand or foot. It is marked by persistence of the webbing between adjacent digits, so they are more or less completely attached. In this type there is usually complete and bilateral syndactyly between the fourth and fifth fingers. Usually it is soft tissue syndactyly but occasionally the distal phalanges are fused. The fifth finger is short with absent or rudimentary middle phalanx. The feet are not affected.

Defects in GJA1 are a cause of hypoplastic left heart syndrome (HLHS) [MIM:241550]. HLHS refers to the abnormal development of the left-sided cardiac structures, resulting in obstruction to blood flow from the left ventricular outflow tract. In addition, the syndrome includes underdevelopment of the left ventricle, aorta, and aortic arch, as well as mitral atresia or stenosis.

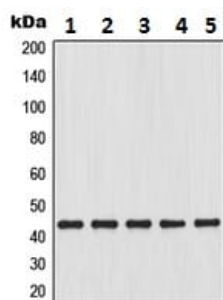
Defects in GJA1 are a cause of Hallermann-Streiff syndrome (HSS) [MIM:234100]. HSS is a disorder characterized by a typical skull shape (brachycephaly with frontal bossing), hypotrichosis, microphthalmia, cataracts, beaked nose, micrognathia, skin atrophy, dental anomalies and proportionate short stature. Mental retardation is present in a minority of cases.

Sequence similarities

Belongs to the connexin family. Alpha-type (group II) subfamily.

Cellular localization

Cell membrane. Cell junction > gap junction.



Western blot - Anti-Connexin 43 / GJA1 antibody (ab230537)

All lanes : Anti-Connexin 43 / GJA1 antibody (ab230537) at 1/500 dilution

Lane 1 : C6 (rat glial tumor cell line) whole cell lysate

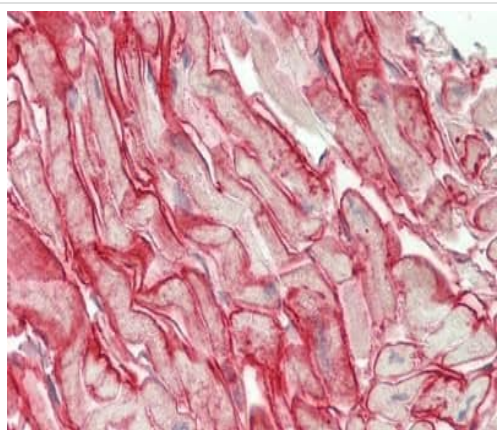
Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 3 : C2C12 (mouse myoblast cell line) whole cell lysate

Lane 4 : Mouse heart tissue lysate

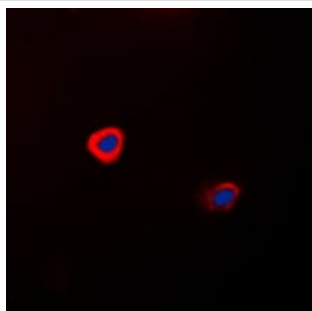
Lane 5 : Rat brain tissue lysate

Predicted band size: 43 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Connexin 43 / GJA1 antibody (ab230537)

Formalin-fixed, paraffin-embedded human heart tissue stained for Connexin 43 / GJA1 using ab230537 at 1/100 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-Connexin 43 / GJA1 antibody (ab230537)

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for Connexin 43 / GJA1 using ab230537 at 1/100 dilution in ICC/IF.

Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight® 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors