

Connexin 46 ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified



REF Catalog no. 700384

(See product label for lot information)

Clone/PAD: 11H16L33
Isotype: IgG
Gene ID: 14611
Protein Acc. No.: Q64448
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation

PBS + 0.09% sodium azide

Immunogen

A peptide corresponding to amino acids 131-144 of Q64448.

Immunogen sequence

GSPRDPPLRDDR GK

Reactivity

This antibody reacts with Mouse Connexin 46. Based on sequence similarity, reactivity to rat and hamster is expected.

Storage

2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.



Expiration Date

Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Western Blotting	mouse	lens	1-3 µg/ml
Immunohistochemistry	mouse	adult lens	0.5-2 µg/ml

Background

Connexin 46 (Cx46), also known as Gap Junction Protein Alpha-3 (GJA3), CAE3, CX46 and C2P3, maps to human chromosome 13q11-q12 and encodes a 46 kDa protein. Cx46, along with Cx50, is principally expressed in the lens of the eye (1). Cx46 mediates intercellular interactions during development and is necessary for the survival of neural crest cells (2). Cx46 forms gap junctions that connect lens fiber cells and are crucial for maintaining lens transparency (3) and normal lens function (4). Mutations of Cx46 result in severe cataracts of the lens (5,6). Individual knockouts of Cx46 and Cx50 lead to changes in the rate of lens fiber cell differentiation and cell size, thus the interaction of Cx46 and Cx50 is required for proper organization of fiber cells (7).

References

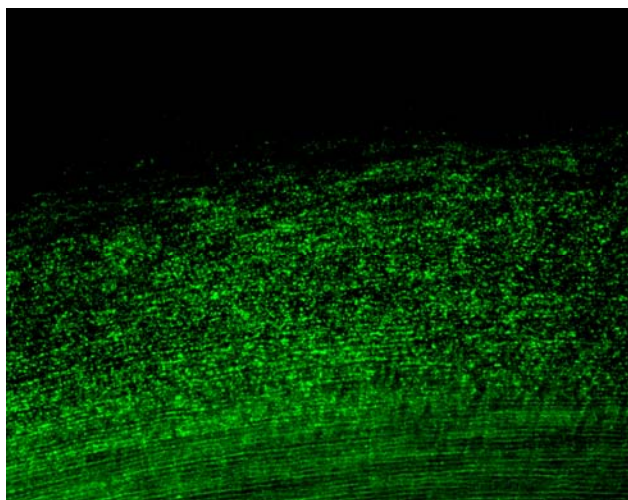
1. White TW. (2002) Unique and redundant connexin contributions to lens development. *Science* 295:319-320.
2. Bannerman P, et al. (2000) Early migratory rat neural crest cells express functional gap junctions: Evidence that neural crest cell survival requires gap junction function. *J Neurosci Res* 61: 605-615.
3. Hopperstad MG, et al. (2000) Properties of gap junction-channels formed by Cx46 alone and in combination with Cx50. *Biophys J* 79: 1954-1966.
4. Pal JD, et al. (2000) Connexin 46 mutations linked to congenital cataract show loss of gap junction channel function. *Am J Physiol Cell Physiol* 279: C596-602.
5. Mackay, D et al. (1999) Connexin46 mutations in autosomal dominant congenital cataract. *Am J Hum Genet* 64: 1357-1364.
6. Jiang H, et al. (2003) A novel mutation in GJA3 (connexin46) for autosomal dominant congenital nuclear pulverulent cataract *Mol Vision* 9:579-593, 2003.
7. Dunia, I. et al. (2006) Structural and immunocytochemical alterations in eye lens fiber cells from Cx46 and Cx50 knockout mice. *Eur. J. Cell Biol.* 85: 729-752.

For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.

www.invitrogen.com

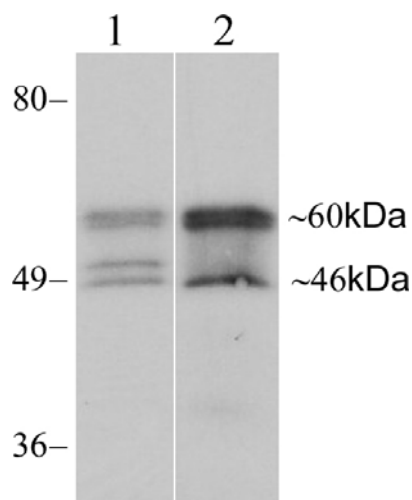
Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

This antibody is manufactured under a licensed process covered by Patent # 5, 599, 681.



Immunohistochemistry of mouse lens tissue labeled with rabbit anti-Connexin 46 (Cat. No. 700384).

Adult mouse lens tissue was labeled with rabbit anti-Connexin 46 (1 µg/ml). Note punctate staining of the lens tissue.



Western blot of mouse lens lysates labeled with rabbit anti-Connexin 46 (Cat. No. 700384).

Rabbit anti-Connexin 46 (2 µg/ml) was used to label Connexin 46 in mouse lens lysates (lane 2). Rabbit polyclonal antibody (Cat. No. 388300) is shown for comparison (lane 1).

For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

This antibody is manufactured under a licensed process covered by Patent # 5, 599, 681.

PI700384 (DCC-09-1998) Rev 12/09

Page 2 of 2

FORM-00089 (Rev 0.0)

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.