**Qty:** 100 µg/400 µL

Rabbit anti-Connexin 31.1 (Mid)

**Catalog No.** 487800

**Lot No.**

# Rabbit anti-Connexin 31.1 (Mid)

## FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

**PAD:** ZMD.693

## IMMUNOGEN
Synthetic peptide derived from the internal region of the mouse Connexin 31.1 protein (Accession# NP_034421), which is 82% homologous to rat sequence.

## SPECIFICITY
This antibody is specific for the Connexin 31.1 (gap junction protein beta 5, Gjb5, Cx31.1, Cnx31.1) protein. On Western blots, it identifies the target band at ~31 kDa. The specificity of this antibody has been validated by tissue samples from the Connexin 31.1 knockout mice.

## REACTIVITY
Reactivity has been confirmed with Connexin 31.1 transfected HeLa cell lysates and mouse skin homogenates by Western blotting and with mouse skin frozen sections by immunohistochemistry. Skin tissue from the Connexin 31.1 knockout mice has been used as the negative control. Reactivity with rat is expected.

| Sample | Western Blotting | Immuno-cytochemistry | Immuno-histochemistry |
|---|---|---|---|
| Human | ND | ND | ND |
| Mouse | +++ | +++ | ++ |
| Rat | ND | ND | ND |

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

## USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Western Blotting:** 2-4 µg/mL
**Immunocytochemistry:** 2-4 µg/mL
**Immunohistochemistry:** 2-4 µg/mL

## STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

## BACKGROUND

Gap junctions are conduits that allow the direct cell-to-cell passage of small cytoplasmic molecules, including ions, metabolic intermediates, and second messengers, and thereby mediate intercellular metabolic and electrical communication.[1] Gap junction channels consist of connexin protein subunits, which are encoded by a multigene family. Connexin 31.1 is a gap junction protein of 271 amino acids encoded by a novel single copy mouse gene on mouse chromosome 4.[2] Northern blot analysis revealed predominant expression of Connexin 31.1 in skin and two related mouse keratinocyte cells. Minor levels of Connexin 31.1 mRNA were detected in testis.[2] Connexin 31.1 mRNA was 15-30 times more abundant in mature skin than in fetal skin.[3] In response to epidermal wounding, Connexin 31.1 was down-regulated in cells both peripheral to and at the wounded edge. The data thus suggest that intercellular communication is intimately involved in regulating epidermal wound repair.[4]

## REFERENCES


1. Nagy JI, et al. *Brain Res Brain Res Rev* 47(1-3):191-215, 2004.
2. Hennemann H, et al. *J Biol Chem* 267(24):17225-17233, 1992.
3. Goliger JA, et al. *Dev Dyn* 200(1):1-13, 1994.
4. Goliger JA, et al. *Mol Biol Cell* 6(11):1491-1501, 1995.


## RELATED PRODUCTS

| ***Product*** | ***Conjugate*** | ***Cat. No.*** |
|---|---|---|
| Protein A | Sepharose 4B | 10-1041 |
| rec-Protein G | Sepharose 4B | 10-1241 |
| ZyMAX™ Goat anti-rabbit IgG | Unconjugated | 81-6100 |
| ZyMAX™ Goat anti-mouse IgG | Unconjugated | 81-6500 |

Secondary antibody conjugates.

| ***Conjugate*** | ***Goat anti-rabbit IgG (H+L)*** | ***Goat anti-mouse IgG (H+L)*** | ***Ex/Em**** | ***Fluorescence similar to--*** |
|---|---|---|---|---|
| Alexa Fluor® 488 | A11008 | A11001 | 495/519 | FITC |
| Alexa Fluor® 555 | A21428 | A21422 | 555/565 | Cy3 |
| Alexa Fluor® 594 | A11012 | A11005 | 590/617 | Texas Red |
| Alexa Fluor® 647 | A21244 | A21235 | 650/668 | Cy5 |
| HRP | 81-6120 | 81-6520 | NA** | NA |
| AP | 81-6122 | 81-6522 | NA | NA |
| Biotin | B2770 | B2763 | NA | NA |

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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