

Highly specific antibodies for cell junction studies

VALIDATED ANTIBODIES FOR CELL JUNCTION TARGETS.

Cell junctions play a key role in regulating small-molecule trafficking between cells, organizing cells into tissues, and adhering cells to each other and to the extracellular matrix. Dysfunctional junctions have been implicated in several pathophysiological conditions, including cancer, neurodegeneration, and cardiovascular dysfunction, among others. The five main types of cell junctions are shown in Figure 1.

Conjugates for a broad range of targets

High-quality antibodies to cell junction targets have been conjugated to Alexa Fluor® dyes—the brightest and most trusted fluorescent dyes available (Table 1). These conjugates are useful not only for direct conjugation but also for colabeling with other antibodies. The sensitivity afforded by the brightness of these antibodies approaches the sensitivity of detection with a secondary antibody detection system. Figure 2 demonstrates the excellent antibody specificity in visualizing tight junctions between human epithelial colorectal adenocarcinoma cells.

Validation with multiple applications

We offer one of the most extensive collections of antibodies for cell junction studies, covering all five primary types of cell junctions: gap junctions, tight junctions, adherens junctions, desmosomes, and hemidesmosomes (Table 2). These antibodies have been validated for multiple applications, including western blotting, ELISA, immunohistochemistry, immunocytochemistry, and immunoprecipitation.

Recombinant ABfinity™ antibodies for even higher specificity

ABfinity™ antibodies are the next generation of antibodies, presented exclusively by Invitrogen. These antibodies are generated by cloning the specific antibody genes and producing them in a mammalian expression system. ABfinity™ technology brings you the most specific antibodies available, resulting in highly reproducible data.

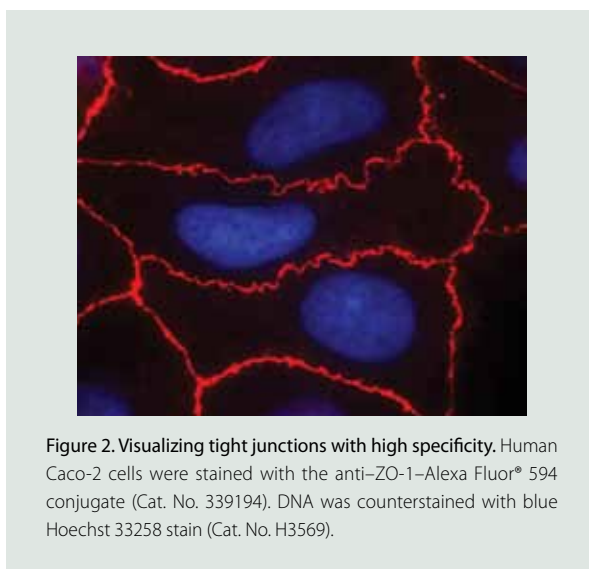
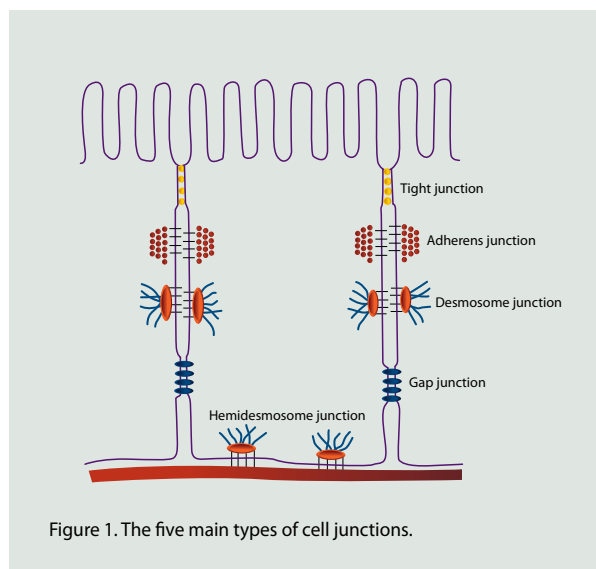
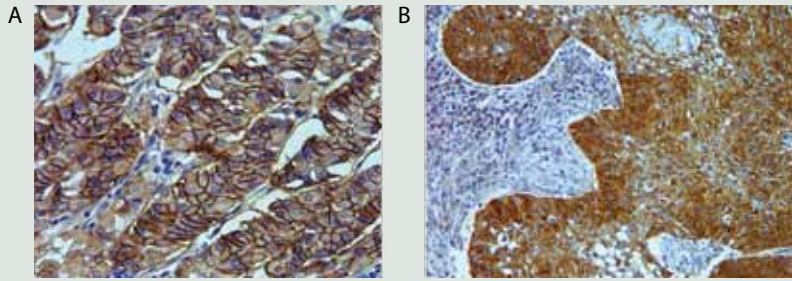


Figure 3. Normal human stomach (A) and squamous lung carcinoma (B) tissues labeled with rabbit anti-claudin-18. Formalin-fixed, paraffin-embedded (FFPE) tissues were labeled immunohistochemically with the SuperPicTure™ Kit (Cat. No. 87-8963). Image magnifications are 40x and 20x, respectively. Note membrane staining of normal stomach and cytoplasmic staining of lung carcinoma tissue.



ABfinity™ recombinant antibodies against the cell junction targets AF-6 and claudin-18 have recently been added to our extensive portfolio of antibodies. Figure 3 demonstrates immunohistochemical results using rabbit anti-claudin-18.

Tools for cell junction research

For more information about ABfinity™ technology, refer to pages 8–10 of this issue. Start exploring our extensive selection of cell junction antibodies at www.invitrogen.com/bp61. ■

Table 1. Alexa Fluor® dye–antibody conjugates for cell junction research.

Antigen	Conjugate	Ex (nm)	Em (nm)	Quantity	Cat. No.
Claudin-1	Alexa Fluor® 488	494	517	100 µg	374988
Claudin-4	Alexa Fluor® 488	494	517	100 µg	329488
Claudin-4	Alexa Fluor® 594	590	617	100 µg	329494
Claudin-5	Alexa Fluor® 488	494	517	100 µg	352588
Connexin 43	Alexa Fluor® 488	494	517	100 µg	138388
Occludin	Alexa Fluor® 488	494	517	100 µg	331588
Occludin	Alexa Fluor® 594	590	617	100 µg	331594
α-Tubulin	Alexa Fluor® 488	494	517	100 µg	322588
ZO-1	Alexa Fluor® 488	494	517	100 µg	339188
ZO-1	Alexa Fluor® 594	590	617	100 µg	339194

Table 2. Antibodies for cell junction research.

Product	Reactivity	Applications	Quantity	Cat. No.
AF-6, ABfinity™ Recombinant Rabbit Monoclonal Antibody	Hu, Ms (B, Cn, Cp, Mk, Rt)	WB, IHC	100 µg	700193
Cadherin-E, Mouse Monoclonal Antibody	Hu	WB, E, IP, IF, IHC, FC, Inhib	100 µg	131700
Claudin-1, Rabbit Polyclonal Antibody	Cn, Hu, Rt	WB, E, IF, IHC	100 µg	519000
Claudin-18, ABfinity™ Recombinant Rabbit Monoclonal Antibody	Hu, Ms (Cn, Cp, Eq, Mk, Rt)	WB, IHC	100 µg	700178
Connexin 43, Rabbit Polyclonal Antibody	Hu, Ms, Rt	WB, E, IHC, ICC, IF	50 µg	710700
N-Cadherin, Mouse Monoclonal Antibody	Ch, Hu, Ms, Rt, Sw	WB, IP, IF, IHC, ICC	100 µg	333900
Occludin, Mouse Monoclonal Antibody	Cn, Hu, Ms, Rt	WB, E, IF	100 µg	331500
β-III-Tubulin, Mouse Monoclonal Antibody	B, Hu, Ms, Rt	WB, IHC (FFPE samples)	100 µg	480011
ZO-1, Mouse Monoclonal Antibody	Cn, Hu	WB, E, IF	100 µg	339100

Reactivity: B = bovine; Ch = chicken; Cn = canine; Cp = chimpanzee; Eq = equine; Hu = human; Mk = monkey (rhesus); Ms = mouse; Rt = rat; Sw = swine. () indicates reactivity predicted but not tested. **Applications:** E = ELISA; ICC = immunocytochemistry; IF = immunofluorescence; IHC = immunohistochemistry; IP = immunoprecipitation; WB = western blotting; **Inhib** = inhibition of E-cadherin–dependent cell-to-cell contact.