

[Skip to Main Content](#)

Login to your account

Email/Username

Password

[Show](#)

[Forgot password?](#)

☒ Remember me

Don't have an account?

[Create a Free Account](#)

If you don't remember your password, you can reset it by entering your email address and clicking the Reset Password button. You will then receive an email that contains a secure link for resetting your password

Email*

If the address matches a valid account an email will be sent to __email__ with instructions for resetting your password

[Cancel](#)

 Advertisement

 [Lung Cancer](#)

[Close](#)

- [Home](#)
- [Articles and Issues](#)
 - [Back](#)
 - [Articles in Press](#)
 - [Current Issue](#)
 - [List of Issues](#)
- [For Authors](#)
 - [Back](#)
 - [About Open Access](#)
 - [Author Information](#)
 - [Permissions](#)
 - [Researcher Academy](#)
 - [Submit a Manuscript](#)
- [Journal Info](#)
 - [Back](#)
 - [About Open Access](#)
 - [About the Journal](#)
 - [Abstracting/Indexing](#)
 - [Advertising Information](#)
 - [Career Opportunities](#)
 - [Contact Information](#)
 - [Editorial Board](#)
 - [Pricing](#)
 - [New Content Alerts](#)
- [Subscribe](#)

- [Society Info](#)
 - [Back](#)
 - [International Lung Cancer Consortium \(ILCCO\)](#)
 - [European Thoracic Oncology Platform \(ETOP\)](#)
 - [British Thoracic Oncology Group \(BTOG\)](#)
- [More Periodicals](#)
 - [Back](#)
 - [Find a Periodical](#)
 - [Go to Product Catalog](#)

Search for...

Go search

All Content



[Advanced Search](#)[Save search](#)

Please enter a term before submitting your search.

[Ok](#)

- [Submit Article](#)
- [Log in](#)
- [Register](#)
- [Log in](#)
 - [Submit Article](#)
 - [Log in](#)
- [Subscribe](#)
- [Claim](#)

Full length article| [Volume 67, ISSUE 2](#), P205-215, February 01, 2010

- [Purchase](#)
 - [Academic and Personal](#)
 - [Corporate R&D Professionals](#)
- [Subscribe](#)
- [Save](#)
 - [Add To Online Library](#) Powered By Mendeley
 - [Add To My Reading List](#)
 - [Export Citation](#)
 - [Create Citation Alert](#)
- [Share](#)

Share on

 - Email
 - Twitter
 - Facebook
 - Linked In
 - Sina Weibo
- [more](#)
 - [Reprints](#)
 - [Request](#)
- [Top](#)

Kaiso is expressed in lung cancer: Its expression and localization is affected by p120ctn

- [Shun-Dong Dai](#)

Shun-Dong Dai

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Yan Wang](#)

Yan Wang

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Gui-Yang Jiang](#)

Gui-Yang Jiang

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Peng-Xin Zhang](#)

Peng-Xin Zhang

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Xin-Jun Dong](#)

Xin-Jun Dong

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Qiang Wei](#)

Qiang Wei

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Hong-Tao Xu](#)

Hong-Tao Xu

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Qing-Chang Li](#)

Qing-Chang Li

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [Chen Zhao](#)

Chen Zhao

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

- [En-Hua Wang](#)

En-Hua Wang

Correspondence

Corresponding author at: Department of Pathology, College of Basic Medical Sciences and First Affiliated Hospital of China Medical University, North 2nd Road 92, Heping Ward, Shenyang 110001, China. Tel.: +86 2423261638; fax: +86 24 23261638.

Contact

Affiliations

Department of Pathology, First Affiliated Hospital and College of Basic Medical Sciences of China Medical University, Shenyang 110001, China

[Search for articles by this author](#)

Published: July 21, 2009 DOI: <https://doi.org/10.1016/j.lungcan.2009.06.013>

[Kaiso is expressed in lung cancer: Its expression and localization is affected by p120ctn](#)

[Previous Article Breast cancer resistant protein \(BCRP\) is a molecular determinant of the outcome of photodynamic therapy \(PDT\) for centrally located early lung cancer](#)

[Next Article Analysis of GD2/GM2 synthase mRNA as a biomarker for small cell lung cancer](#)



 Advertisement

Abstract

Background

Kaiso is a recently identified transcription factor that binds to p120-catenin (p120ctn), an Armadillo catenin and cell adhesion cofactor. However, clinical studies of human solid tumors have not been reported to investigate relationship between these proteins.

Methods

Expression and localization of Kaiso and p120ctn were examined in 196 lung cancer specimens (including 55 cases of paired lymph node metastases and 80 cases with complete follow-up records) by immunohistochemistry. Three lung cancer cell lines, BE1, SPC, and A549 were used to establish p120ctn stably ablated or overexpressed cell lines. Co-immunoprecipitation was used to confirm p120ctn bind Kaiso in lung cancer tissue and cell lines. Localization and expression levels of Kaiso were detected via immunofluorescence, cytoplasmic vs. nuclear fractionation Western blot analysis and reverse transcription-polymerase chain reaction.

Results

Cytoplasmic Kaiso expression was evident in 115 (58.7%), and abnormal p120ctn expression was noted in 168 (85.7%). Cytoplasmic Kaiso and abnormal p120ctn expressions were associated with higher degree of malignancy (high-stage and lymph node metastases, all $P < 0.05$). Abnormal p120ctn and cytoplasmic Kaiso expressions were higher in matched autologous nodal metastases than in primary growths. The lung cancer-related 5-year survival rate was significantly lower in patients who were cytoplasmic Kaiso-positive (22.9%; $P = 0.029$) or abnormal p120ctn expression (20.6%; $P = 0.001$). Multivariate analysis showed abnormal p120ctn expression was an independent factor defining the clinicopathological characters of patients. Cytoplasmic Kaiso expression was correlated with cytoplasmic p120ctn, they formed Kaiso–p120ctn complex in lung cancer tissues and cell lines. In addition, p120ctn ablation and overexpression altered Kaiso subcellular localization and protein level. Although both isoforms can regulate subcellular localization and protein levels of Kaiso, we found that only p120ctn isoform 3, but not isoform 1, directly interacts with Kaiso.

Conclusion

p120ctn and Kaiso might co-participate in the progression and lymph node metastasis of lung cancer. p120ctn regulates expression and localization of Kaiso in lung cancer cells.

Keywords

- [Lung cancer](#)
- [Clinicopathological factors](#)
- [Kaiso](#)
- [p120ctn](#)
- [Metastasis](#)

To read this article in full you will need to make a payment

Purchase one-time access:

[Academic and PersonalCorporate R&D Professionals](#)

- One-time access price info

Subscribe:

[Subscribe to Lung Cancer](#)

Already a print subscriber? [Claim online access](#)

Already an online subscriber? [Sign in](#)

Register: [Create an account](#)

Institutional Access: [Sign in to ScienceDirect](#)

References

1.
 - Maeda M.
 - Johnson E.
 - Mandal S.H.
 - Lawson K.R.
 - Keim S.A.
 - Svoboda R.A.
 - et al.

Expression of inappropriate cadherins by epithelial tumor cells promotes endocytosis and degradation of E-cadherin via competition for p120(ctn).

Oncogene. 2006; 25: 4595-4604

[View in Article](#)

- [Scopus \(51\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

2.
 - Moreno-Bueno G.
 - Hardisson D.
 - Sarrio D.
 - Sanchez C.
 - Cassia R.
 - Prat J.
 - et al.

Abnormalities of E- and P-cadherin and catenin (beta-, gamma-catenin, and p120ctn) expression in endometrial cancer and endometrial atypical hyperplasia.

J Pathol. 2003; 199: 471-478

[View in Article](#)

- [Scopus \(119\)](#)
- [PubMed](#)

- [Crossref](#)
 - [Google Scholar](#)
3. ◦ Birchmeier W.
◦ Behrens J.
Cadherin expression in carcinomas: role in the formation of cell junctions and the prevention of invasiveness.
Biochim Biophys Acta. 1994; 1198: 11-26
[View in Article](#)
- [Scopus \(921\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
4. ◦ Davis M.A.
◦ Reynolds A.B.
Blocked acinar development, E-cadherin reduction, and intraepithelial neoplasia upon ablation of p120-catenin in the mouse salivary gland.
Dev Cell. 2006; 10: 21-31
[View in Article](#)
- [Scopus \(146\)](#)
 - [PubMed](#)
 - [Abstract](#)
 - [Full Text](#)
 - [Full Text PDF](#)
 - [Google Scholar](#)
5. ◦ Thoreson M.A.
◦ Reynolds A.B.
Altered expression of the catenin p120 in human cancer: implications for tumor progression.
Differentiation. 2002; 70: 583-589
[View in Article](#)
- [Scopus \(132\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
6. ◦ Anastasiadis P.Z.
◦ Reynolds A.B.
The p120 catenin family: complex roles in adhesion, signaling and cancer.
J Cell Sci. 2000; 113: 1319-1334
[View in Article](#)
- [PubMed](#)
 - [Google Scholar](#)
7. ◦ Davis M.A.
◦ Ireton R.C.
◦ Reynolds A.B.
A core function for p120-catenin in cadherin turnover.
J Cell Biol. 2003; 163: 525-534
[View in Article](#)
- [Scopus \(558\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
8. ◦ Xiao K.
◦ Allison D.F.
◦ Buckley K.M.
◦ Kottke M.D.
◦ Vincent P.A.
◦ Faundez V.
◦ et al.

Cellular levels of p120 catenin function as a set point for cadherin expression levels in microvascular endothelial cells.

J Cell Biol. 2003; 163: 535-545

[View in Article](#)

- [Scopus \(341\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

9. ◦ Ireton R.C.
◦ Davis M.A.
◦ van Hengel J.
◦ Mariner D.J.
◦ Barnes K.
◦ Thoreson M.A.
◦ et al.

A novel role for p120 catenin in E-cadherin function.

J Cell Biol. 2002; 159: 465-476

[View in Article](#)

- [Scopus \(431\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

10. ◦ Liu Y.
◦ Xu H.T.
◦ Dai S.D.
◦ Wei Q.
◦ Yuan X.M.
◦ Wang E.H.

Reduction of p120(ctn) isoforms 1 and 3 is significantly associated with metastatic progression of human lung cancer.

Apmis. 2007; 115: 848-856

[View in Article](#)

- [Scopus \(28\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

11. ◦ Liu Y.
◦ Li Q.C.
◦ Miao Y.
◦ Xu H.T.
◦ Dai S.D.
◦ Wei Q.
◦ et al.

Ablation of p120-catenin enhances invasion and metastasis of human lung cancer cells.

Cancer Sci. 2009; 100: 441-448

[View in Article](#)

- [Scopus \(45\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

12. ◦ Wang E.H.
◦ Liu Y.
◦ Xu H.T.
◦ Dai S.D.
◦ Liu N.
◦ Xie C.Y.
◦ et al.

Abnormal expression and clinicopathologic significance of p120-catenin in lung cancer.
Histol Histopathol. 2006; 21: 841-847

[View in Article](#)

- [PubMed](#)
- [Google Scholar](#)

13. ◦ Reynolds A.B.
◦ Roesel D.J.
◦ Kanner S.B.
◦ Parsons J.T.

Transformation-specific tyrosine phosphorylation of a novel cellular protein in chicken cells expressing oncogenic variants of the avian cellular src gene.
Mol Cell Biol. 1989; 9: 629-638

[View in Article](#)

- [Scopus \(286\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

14. ◦ Kanner S.B.
◦ Reynolds A.B.
◦ Parsons J.T.

Tyrosine phosphorylation of a 120-kilodalton pp60src substrate upon epidermal growth factor and platelet-derived growth factor receptor stimulation and in polyomavirus middle-T-antigen-transformed cells.

Mol Cell Biol. 1991; 11: 713-720

[View in Article](#)

- [Scopus \(103\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

15. ◦ Downing J.R.
◦ Reynolds A.B.

PDGF, CSF-1, and EGF induce tyrosine phosphorylation of p120, a pp60src transformation-associated substrate.

Oncogene. 1991; 6: 607-613

[View in Article](#)

- [PubMed](#)
- [Google Scholar](#)

16. ◦ Reynolds A.B.
◦ Roczniaak-Ferguson A.

Emerging roles for p120-catenin in cell adhesion and cancer.

Oncogene. 2004; 23: 7947-7956

[View in Article](#)

- [Scopus \(218\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

17. ◦ Anastasiadis P.Z.
◦ Moon S.Y.
◦ Thoreson M.A.
◦ Mariner D.J.
◦ Crawford H.C.
◦ Zheng Y.
◦ et al.

Inhibition of RhoA by p120 catenin.

Nat Cell Biol. 2000; 2: 637-644

[View in Article](#)

- [Scopus \(371\)](#)

- [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
18. ◦ Grosheva I.
 ◦ Shtutman M.
 ◦ Elbaum M.
 ◦ Bershadsky A.D.
 p120 catenin affects cell motility via modulation of activity of Rho-family GTPases: a link between cell–cell contact formation and regulation of cell locomotion.
J Cell Sci. 2001; 114: 695-707
[View in Article](#)
- [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
19. ◦ Noren N.K.
 ◦ Liu B.P.
 ◦ Burridge K.
 ◦ Kreft B.
 p120 catenin regulates the actin cytoskeleton via Rho family GTPases.
J Cell Biol. 2000; 150: 567-580
[View in Article](#)
- [Scopus \(454\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
20. ◦ Daniel J.M.
 ◦ Reynolds A.B.
 The catenin p120(ctn) interacts with Kaiso, a novel BTB/POZ domain zinc finger transcription factor.
Mol Cell Biol. 1999; 19: 3614-3623
[View in Article](#)
- [Scopus \(330\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
21. ◦ Daniel J.M.
 ◦ Spring C.M.
 ◦ Crawford H.C.
 ◦ Reynolds A.B.
 ◦ Baig A.
 The p120(ctn)-binding partner Kaiso is a bi-modal DNA-binding protein that recognizes both a sequence-specific consensus and methylated CpG dinucleotides.
Nucleic Acids Res. 2002; 30: 2911-2919
[View in Article](#)
- [Scopus \(193\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
22. ◦ Kelly K.F.
 ◦ Spring C.M.
 ◦ Otchere A.A.
 ◦ Daniel J.M.
 NLS-dependent nuclear localization of p120ctn is necessary to relieve Kaiso-mediated transcriptional repression.
J Cell Sci. 2004; 117: 2675-2686
[View in Article](#)
- [Scopus \(87\)](#)

- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 23. ◦ Kim S.W.
- Park J.I.
- Spring C.M.
- Sater A.K.
- Ji H.
- Otchere A.A.
- et al.

Non-canonical Wnt signals are modulated by the Kaiso transcriptional repressor and p120-catenin.
Nat Cell Biol. 2004; 6: 1212-1220

[View in Article](#)

- [Scopus \(132\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 24. ◦ Park J.I.
- Kim S.W.
- Lyons J.P.
- Ji H.
- Nguyen T.T.
- Cho K.
- et al.

Kaiso/p120-catenin and TCF/beta-catenin complexes coordinately regulate canonical Wnt gene targets.

Dev Cell. 2005; 8: 843-854

[View in Article](#)

- [Scopus \(182\)](#)
- [PubMed](#)
- [Abstract](#)
- [Full Text](#)
- [Full Text PDF](#)
- [Google Scholar](#)
- 25. ◦ Spring C.M.
- Kelly K.F.
- O'Kelly I.
- Graham M.
- Crawford H.C.
- Daniel J.M.

The catenin p120ctn inhibits Kaiso-mediated transcriptional repression of the beta-catenin/TCF target gene matrilysin.

Exp Cell Res. 2005; 305: 253-265

[View in Article](#)

- [Scopus \(101\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 26. ◦ Kelly K.F.
- Otchere A.A.
- Graham M.
- Daniel J.M.

Nuclear import of the BTB/POZ transcriptional regulator Kaiso.

J Cell Sci. 2004; 117: 6143-6152

[View in Article](#)

- [Scopus \(44\)](#)
- [PubMed](#)

- [Crossref](#)
- [Google Scholar](#)
- 27. ◦ Soubry A.
- van Hengel J.
- Parthoens E.
- Colpaert C.
- Van Marck E.
- Waltregny D.
- et al.

Expression and nuclear location of the transcriptional repressor Kaiso is regulated by the tumor microenvironment.

Cancer Res. 2005; 65: 2224-2233

[View in Article](#)

- [Scopus \(54\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 28. ◦ Liu Y.
- Dong Q.Z.
- Zhao Y.
- Dong X.J.
- Miao Y.
- Dai S.D.
- et al.

P120-catenin isoforms 1A and 3A differently affect invasion and proliferation of lung cancer cells.

Exp Cell Res. 2009; 315: 890-898

[View in Article](#)

- [Scopus \(28\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 29. ◦ Yanagisawa M.
- Kaverina I.N.
- Wang A.
- Fujita Y.
- Reynolds A.B.
- Anastasiadis P.Z.

A novel interaction between kinesin and p120 modulates p120 localization and function.

J Biol Chem. 2004; 279: 9512-9521

[View in Article](#)

- [Scopus \(110\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 30. ◦ Roczniak-Ferguson A.
- Reynolds A.B.

Regulation of p120-catenin nucleocytoplasmic shuttling activity.

J Cell Sci. 2003; 116: 4201-4212

[View in Article](#)

- [Scopus \(70\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)
- 31. ◦ van Hengel J.
- Vanhoenacker P.
- Staes K.
- van Roy F.

Nuclear localization of the p120(ctn) Armadillo-like catenin is counteracted by a nuclear export signal and by E-cadherin expression.

Proc Natl Acad Sci U S A. 1999; 96: 7980-7985

[View in Article](#)

- [Scopus \(140\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

32. ◦ Aho S.
◦ Levansuo L.
◦ Montonen O.
◦ Kari C.
◦ Rodeck U.
◦ Uitto J.

Specific sequences in p120ctn determine subcellular distribution of its multiple isoforms involved in cellular adhesion of normal and malignant epithelial cells.

J Cell Sci. 2002; 115: 1391-1402

[View in Article](#)

- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

33. ◦ Watanabe Y.

TNM classification for lung cancer.

Ann Thorac Cardiovasc Surg. 2003; 9: 343-350

[View in Article](#)

- [PubMed](#)
- [Google Scholar](#)

34. ◦ Sobin D.H.
◦ Witteking C.

International Union Against Cancer (UICC): TNM classification of malignant tumours.

6th ed. Wiley-Liss, New York 2002

[View in Article](#)

- [Google Scholar](#)

35. ◦ Dai S.D.
◦ Zhang X.W.
◦ Qi F.J.
◦ Xu H.T.
◦ Wang E.H.

Expression of E-cadherin, beta-catenin and p120ctn in the pulmonary sclerosing hemangioma.

Lung Cancer. 2007; 57: 54-59

[View in Article](#)

- [Scopus \(12\)](#)
- [PubMed](#)
- [Abstract](#)
- [Full Text](#)
- [Full Text PDF](#)
- [Google Scholar](#)

36. ◦ Liu Y.
◦ Wang Y.
◦ Zhang Y.
◦ Miao Y.
◦ Zhao Y.
◦ Zhang P.X.
◦ et al.

Abnormal expression of p120-catenin, E-cadherin, and small GTPases is significantly associated with malignant phenotype of human lung cancer.

Lung Cancer. 2009; 63: 375-382

[View in Article](#)

- [Scopus \(87\)](#)
- [PubMed](#)
- [Abstract](#)
- [Full Text](#)
- [Full Text PDF](#)
- [Google Scholar](#)

37. ◦ Ogden S.R.
◦ Wroblewski L.E.
◦ Weydig C.
◦ Romero-Gallo J.
◦ O'Brien D.P.
◦ Israel D.A.
◦ et al.

p120 and Kaiso regulate *Helicobacter pylori*-induced expression of matrix metalloproteinase-7.
Mol Biol Cell. 2008; 19: 4110-4121

[View in Article](#)

- [Scopus \(58\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

38. ◦ Lopes E.C.
◦ Valls E.
◦ Figueroa M.E.
◦ Mazur A.
◦ Meng F.G.
◦ Chiosis G.
◦ et al.

Kaiso contributes to DNA methylation-dependent silencing of tumor suppressor genes in colon cancer cell lines.

Cancer Res. 2008; 68: 7258-7263

[View in Article](#)

- [Scopus \(80\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

39. ◦ Bardwell V.J.
◦ Treisman R.

The POZ domain: a conserved protein–protein interaction motif.

Genes Dev. 1994; 8: 1664-1677

[View in Article](#)

- [Scopus \(647\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

40. ◦ Albagli O.
◦ Dhordain P.
◦ Deweindt C.
◦ Lecocq G.
◦ Leprince D.

The BTB/POZ domain: a new protein–protein interaction motif common to DNA- and actin-binding proteins.

Cell Growth Differ. 1995; 6: 1193-1198

[View in Article](#)

- [PubMed](#)
- [Google Scholar](#)

41. ◦ Prokhortchouk A.

- Hendrich B.
- Jorgensen H.
- Ruzov A.
- Wilm M.
- Georgiev G.
- et al.

The p120 catenin partner Kaiso is a DNA methylation-dependent transcriptional repressor.
Genes Dev. 2001; 15: 1613-1618

[View in Article](#)

- [Scopus \(362\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

42. ◦ Ruzov A.
- Dunican D.S.
 - Prokhortchouk A.
 - Pennings S.
 - Stancheva I.
 - Prokhortchouk E.
 - et al.

Kaiso is a genome-wide repressor of transcription that is essential for amphibian development.
Development. 2004; 131: 6185-6194

[View in Article](#)

- [Scopus \(98\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

43. ◦ Yoon H.G.
- Chan D.W.
 - Reynolds A.B.
 - Qin J.
 - Wong J.

N-CoR mediates DNA methylation-dependent repression through a methyl CpG binding protein Kaiso.

Mol Cell. 2003; 12: 723-734

[View in Article](#)

- [Scopus \(281\)](#)
- [PubMed](#)
- [Abstract](#)
- [Full Text](#)
- [Full Text PDF](#)
- [Google Scholar](#)

44. ◦ van Roy F.M.
- McCrea P.D.

A role for Kaiso–p120ctn complexes in cancer?.

Nat Rev Cancer. 2005; 5: 956-964

[View in Article](#)

- [Scopus \(92\)](#)
- [PubMed](#)
- [Crossref](#)
- [Google Scholar](#)

45. ◦ Kelly K.F.
- Daniel J.M.

POZ for effect—POZ-ZF transcription factors in cancer and development.

Trends Cell Biol. 2006; 16: 578-587

[View in Article](#)

- [Scopus \(202\)](#)

- [PubMed](#)
 - [Abstract](#)
 - [Full Text](#)
 - [Full Text PDF](#)
 - [Google Scholar](#)
46. ◦ Daniel J.M.
Dancing in and out of the nucleus: p120(ctn) and the transcription factor Kaiso.
Biochim Biophys Acta. 2007; 1773: 59-68
[View in Article](#)
- [Scopus \(103\)](#)
 - [PubMed](#)
 - [Crossref](#)
 - [Google Scholar](#)
47. ◦ Park J.I.
◦ Ji H.
◦ Jun S.
◦ Gu D.
◦ Hikasa H.
◦ Li L.
◦ et al.
Frodo links Dishevelled to the p120-catenin/Kaiso pathway: distinct catenin subfamilies promote Wnt signals.
Dev Cell. 2006; 11: 683-695
[View in Article](#)
- [Scopus \(80\)](#)
 - [PubMed](#)
 - [Abstract](#)
 - [Full Text](#)
 - [Full Text PDF](#)
 - [Google Scholar](#)

Article Info

Publication History

Published online: July 21, 2009

Accepted: June 16, 2009

Received in revised form: June 11, 2009

Received: March 16, 2009

Identification

DOI: <https://doi.org/10.1016/j.lungcan.2009.06.013>

Copyright

© 2009 Elsevier Ireland Ltd. Published by Elsevier Inc. All rights reserved.

ScienceDirect

[Access this article on ScienceDirect](#)

Linked Article

- [RETRACTED: Kaiso is expressed in lung cancer: Its expression and localization is affected by p120ctn](#)
Lung Cancer Vol. 102
 - [Preview](#)
This article has been retracted: please see Elsevier Policy on Article Withdrawal (<http://www.elsevier.com/locate/withdrawalpolicy>).
 - [Full-Text](#)
 - [PDF](#)

Related Articles

[Hide Caption](#)[Download](#)[See figure in Article](#)
[Toggle Thumbstrip](#)

- [Download Hi-res image](#)
- [Download .PPT](#)



[Home](#)

ARTICLES AND ISSUES

[Articles in Press](#)

[Current Issue](#)

[List of Issues](#)

FOR AUTHORS

[About Open Access](#)

[Author Information](#)

[Permissions](#)

[Researcher Academy](#)

[Submit a Manuscript](#)

JOURNAL INFO

[About Open Access](#)

[About the Journal](#)

[Abstracting/Indexing](#)

[Advertising Information](#)

[Career Opportunities](#)

[Contact Information](#)

[Editorial Board](#)

[Pricing](#)

[New Content Alerts](#)

SUBSCRIBE

SOCIETY INFO

[International Lung Cancer Consortium \(ILCCO\)](#)

[European Thoracic Oncology Platform \(ETOP\)](#)

[British Thoracic Oncology Group \(BTOG\)](#)

MORE PERIODICALS

[Find a Periodical](#)

[Go to Product Catalog](#)

We use cookies to help provide and enhance our service and tailor content. To update your cookie settings, please visit the [Cookie Preference Center](#) for this site.

Copyright © 2022 Elsevier Inc. except certain content provided by third parties. The content on this site is intended for healthcare professionals.

- [Privacy Policy](#)
- [Terms and Conditions](#)
- [Accessibility](#)
- [Help & Contact](#)

