

# pirin (D-12): sc-271622

## BACKGROUND

Pirin (also designated iron-binding nuclear protein) is a highly conserved eukaryotic protein involved in transcriptional activation and apoptosis. Pirin mRNA is poorly expressed in all human tissues, and multiple pirin transcripts are expressed in heart and skeletal muscle. Research indicates that the expression of pirin may be localized to subnuclear structures. The interaction of pirin with NF1/CTF1 (nuclear factor I/CCAAT box transcription factor) classifies pirin as a putative NF1/CTF1 cofactor, which might lead to new insights in NF1/CTF1 activity. Pirin may be a significant factor in transcriptional regulation and is presumably involved in the regulation of DNA transcription and replication.

## REFERENCES

1. Wendler, W.M., et al. 1997. Identification of pirin, a novel highly conserved nuclear protein. *J. Biol. Chem.* 272: 8482-8489.
2. Orzaez, D., et al. 2001. A tomato homologue of the human protein pirin is induced during programmed cell death. *Plant Mol. Biol.* 46: 459-468.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603329. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Zeng, Q., et al. 2003. Purification, crystallization and preliminary X-ray analysis of human pirin. *Acta Crystallogr. D Biol. Crystallogr.* 59: 1496-1498.
5. Hihara, Y., et al. 2004. A cyano-bacterial gene encoding an ortholog of pirin is induced under stress conditions. *FEBS Lett.* 574: 101-105.
6. Pang, H., et al. 2004. Crystal structure of human pirin: an iron-binding nuclear protein and transcription cofactor. *J. Biol. Chem.* 279: 1491-1498.
7. Yoshikawa, R., et al. 2004. Gene expression in response to anti-tumour intervention by polysaccharide-K (PSK) in colorectal carcinoma cells. *Oncol. Rep.* 12: 1287-1293.

## CHROMOSOMAL LOCATION

Genetic locus: PIR (human) mapping to Xp22.2.

## SOURCE

pirin (D-12) is a mouse monoclonal antibody raised against amino acids 1-290 representing full length pirin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271622 X, 200 µg/0.1 ml.

pirin (D-12) is available conjugated to agarose (sc-271622 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271622 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271622 PE), fluorescein (sc-271622 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271622 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271622 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271622 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271622 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271622 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271622 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

pirin (D-12) is recommended for detection of pirin of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for pirin siRNA (h): sc-61359, pirin shRNA Plasmid (h): sc-61359-SH and pirin shRNA (h) Lentiviral Particles: sc-61359-V.

pirin (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of pirin: 32 kDa.

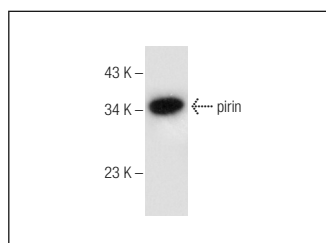
Molecular Weight (observed) of pirin: 37 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

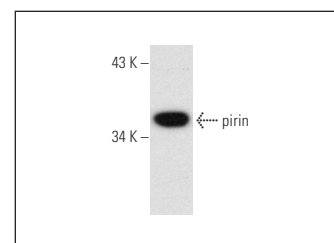
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



pirin (D-12): sc-271622. Western blot analysis of pirin expression in Hep G2 whole cell lysate.



pirin (D-12): sc-271622. Western blot analysis of pirin expression in HeLa whole cell lysate.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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