SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p62 (Q-19): sc-292

BACKGROUND

Initiation of transcription from protein-coding genes in eukaryotes is a complex process that requires RNA polymerase II, as well as families of basal transcription factors. Binding of the factor TFIID (TBP) to the TATA box is believed to be the first step in the formation of a multiprotein complex containing several additional factors, including TFIIA, TFIIB, TFIIE, TFIIF and TFII. TFIIH (or BTF2) is a multisubunit transcription/DNA repair factor that possesses several enzymatic activities. The core of TFIIH is composed of five subunits, designated p89 (XPB or ERCC3), p62, p52, p44 and p34. Additional subunits of the TFIIH complex are p80 (XPD or ERCC2) and the ternary kinase complex composed of Cdk7, cyclin H and MAT1. Both p89 and p80 have ATP-dependent helicase activity. The p62, p52 and p44 subunits have been shown to be involved in nucleotide excision repair.

CHROMOSOMAL LOCATION

Genetic locus: GTF2H1 (human) mapping to 11p15.1; Gtf2h1 (mouse) mapping to 7 B4.

SOURCE

TFIIH p62 (Q-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of TFIIH p62 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-292 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-292 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TFIIH p62 (Q-19) is recommended for detection of TFIIH p62 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

TFIIH p62 (Q-19) is also recommended for detection of TFIIH p62 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TFIIH p62 siRNA (h): sc-38530, TFIIH p62 siRNA (m): sc-38531, TFIIH p62 shRNA Plasmid (h): sc-38530-SH, TFIIH p62 shRNA Plasmid (m): sc-38531-SH, TFIIH p62 shRNA (h) Lentiviral Particles: sc-38530-V and TFIIH p62 shRNA (m) Lentiviral Particles: sc-38531-V.

TFIIH p62 (Q-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFIIH p62: 62 kDa.

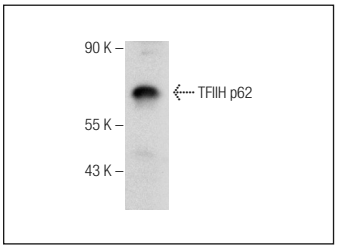
RESEARCH USE

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

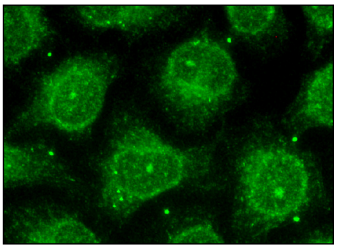
STORAGE

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

DATA



TFIIH p62 (Q-19): sc-292. Western blot analysis of TFIIH p62 expression in A-431 nuclear extract.



TFIIH p62 (Q-19): sc-292. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Serizawa, H., et al. 1995. Association of Cdk-activating kinase subunits with transcription factor TFIIH. Nature 374: 280-282.
2. Colton, S.L. and Xu, X.S. 2006. The involvement of ataxia-telangiectasia mutated protein activation in nucleotide excision repair-facilitated cell survival with cisplatin treatment. J. Biol. Chem. 281: 27117-27125.
3. Ryser, S., et al. 2007. The rate of c-Fos transcription *in vivo* is continuously regulated at the level of elongation by dynamic stimulus-coupled recruitment of positive transcription elongation factor β. J. Biol. Chem. 282: 5075-5084.
4. Roy, S. and Tenniswood, M. 2007. Site-specific acetylation of p53 directs selective transcription complex assembly. J. Biol. Chem. 282: 4765-4771.
5. Boeing, S., et al. 2010. RNA polymerase II C-terminal heptarepeat domain Ser-7 phosphorylation is established in a mediator-dependent fashion. J. Biol. Chem. 285: 188-196.
6. Cabart, P., et al. 2011. Transcription factor TFIIF is not required for initiation by RNA polymerase II, but it is essential to stabilize transcription factor TFIIB in early elongation complexes. Proc. Natl. Acad. Sci. USA 108: 15786-15791.
7. Kemp, M.G., et al. 2012. Mechanism of release and fate of excised oligonucleotides during nucleotide excision repair. J. Biol. Chem. 287: 22889-22899.
8. Wang, W., et al. 2013. Mediator MED23 regulates basal transcription *in vivo* via an interaction with P-TEFβ. Transcription 4: 39-51.