

#3261 Store at -20°C

# eIF3j Antibody



✓ 100 µl  
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

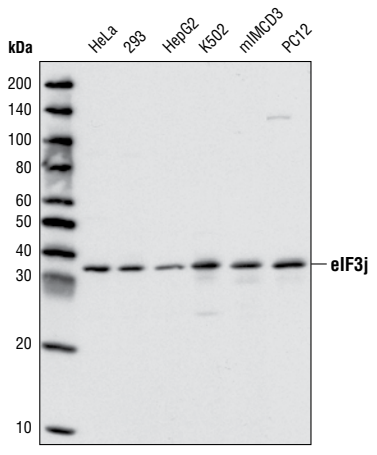
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R	35 kDa	Rabbit**

**Background:** Translation initiation requires a set of factors to facilitate the association of the 40S ribosomal subunit with mRNA. The eIF4F complex, consisting of eIF4E, eIF4A and eIF4G, binds to the 5' cap structure of mRNA. eIF4F and eIF4B unwind the secondary structure of mRNA at its 5' untranslated region. The 40S ribosomal subunit, along with some initiation factors including eIF3, then binds to the 5' mRNA cap and searches along the mRNA for the initiation codon. eIF3 is a large translation initiation complex with 10 to 13 different subunits. eIF3a, eIF3b, eIF3c, eIF3e, eIF3f and eIF3h are the core subunits critical for the function of this complex. eIF3 physically interacts with eIF4G, which may be responsible for the association of the 40S ribosomal subunit with mRNA (1). eIF3 also stabilizes the binding of Met-tRNA<sup>f</sup>.eIF2.GTP to the 40S ribosomal subunit and helps keep the integrity of the resulting complex upon addition of the 60S ribosomal subunit (2). Studies have shown that mTOR interacts with eIF3 directly (3,4). When cells are stimulated by hormones or mitogenic signals, mTOR binds to the eIF3 complex and phosphorylates S6K1 (3). This process results in the dissociation of S6K1 from eIF3 and S6K1 activation. The activated S6K1 then phosphorylates its downstream targets including ribosomal protein S6 and eIF4B resulting in stimulation of translation. Further findings demonstrated that activated mTOR signaling induces the association of eIF3 with eIF4G upon stimulation with insulin (3).

One of the smallest subunits of eIF3, eIF3j, is critical in 40S initiation complex assembly (5). eIF3j has been shown to associate with the aminoacyl site and mRNA entry channel of the 40S ribosomal subunit (6). eIF3j has also been shown to have an additional role in the recycling of post-termination complexes (7).

**Specificity/Sensitivity:** eIF3j Antibody detects endogenous levels of total eIF3j protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) derived from the sequence of human eIF3j. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell types using eIF3j Antibody.

### Background References:

- (1) Masutani, M. et al. (2007) *EMBO J* 26, 3373–83.
- (2) Chaudhuri, J. et al. (1999) *J Biol Chem* 274, 17975–80.
- (3) Holz, M.K. et al. (2005) *Cell* 123, 569–80.
- (4) Harris, T.E. et al. (2006) *EMBO J* 25, 1659–68.
- (5) Fraser, C.S. et al. (2004) *J Biol Chem* 279, 8946–56.
- (6) Fraser, C.S. et al. (2007) *Mol Cell* 26, 811–9.
- (7) Pisarev, A.V. et al. (2007) *Cell* 131, 286–99.

Entrez-Gene ID #8669  
Swiss-Prot Acc. #O75822

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by Western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

### Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

### Companion Products:

- Translation Initiation Complex Antibody Sampler Kit #4763
- eIF3A Antibody #2538
- eIF3C Antibody #2068
- Phospho-eIF2α (Ser51) (119A11) Rabbit mAb #3597
- Phospho-eIF2α (Ser51) Antibody #9721
- eIF2α (L57A5) Mouse mAb #2103
- eIF2α Antibody #9722
- eIF2B-ε Antibody #3595
- eIF4A (C32B4) Rabbit mAb #2013
- eIF4A (F52) Antibody #2425
- eIF4A1 Antibody #2490
- Phospho-eIF4B (Ser422) Antibody #3591
- eIF4B Antibody #3592
- Phospho-eIF4E (Ser209) Antibody #9741
- eIF4E (C46H6) Rabbit mAb #2067
- eIF4E Antibody #9742
- Phospho-eIF4G (Ser1108) Antibody #2441
- Phototope<sup>®</sup>-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO<sup>®</sup> Reagent and 20X Peroxide #7003

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.