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AR09541PU-L Human FKBP14 / FKBP22 (20-211, His-tag) - Purified

Alternate names: 22 kDa FK506-binding protein, FK506-binding protein 14, FKBP-14, FKBP-22, Peptidyl-prolyl cis-trans isomerase FKBP14, Rotamase

Quantity: 0.5 mg

Concentration: 1.0 mg/ml (determined by Bradford assay)

Background: FKBP14, also known as 22 kDa FK506-binding protein, is an enzyme that accelerates the folding of proteins during protein synthesis. This protein contains two EF-hand domains and one PPIase FKBP-type domain. Truncation of the amino-terminus of FKBP14 greatly reduces peptidyl prolyl cis-trans isomerase activity, therefore suggesting that the PPIase FKBP-type domain must be located at the N-terminus.

Uniprot ID: Q9NWM8

NCBI: NP_060416

GeneID: 55033

Species: Human

Source: E. coli

Format:
State: Liquid purified protein
Purity: >90%
Buffer System: PBS, pH 7.4, containing 10% glycerol

Description: Recombinant human FKBP14 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MALIPEPEVK IEVLQKPFIC HRKTKGGDLM LVHYEGYLEK DGSLFHSTHK HNNGQPIWFT LGILEALKGW DQGLKGMCVG EKRKLIIPPA LGYGKEGKGK IPPESTLIFN IDLLEIRNGP RSHESFQEMD LNDDWKLSKD EVKAYLKKEF EKHGAVVNES HHDALVEDIF DKEDEDKDGF ISAREFTYKH DEL
Specific Activity: > 240 nmoles/min/mg, defined as the amount of enzyme that cleaves
1 umole of suc-AAFP-pNA per minute at 25°C in Tris-HCl pH 8.0 using chymotrypsin
Molecular weight: 24.2 kDa (213aa) confirmed by MALDI-TOF

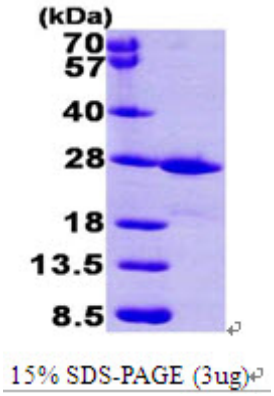
Storage: Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:
Tremmel D., et al. (2007) J Mol Biol. 369(1):55-68.
Budiman C., et al. (2009) FEBS J. 276(15):4091-101.

Protocols: **Activity Assay**
1. Prepare 170 ul assay buffer into a suitable container and pre-chill on ice before use: The final concentrations are 200 mM Tris-HCl, pH 8.0, and 20nM chymotrypsin.
2. Add 10 ul of recombinant FKBP14 protein with 1 ug in assay buffer.
3. Mix by inversion and equilibrate to 1°C and monitor the A405nm until the value is

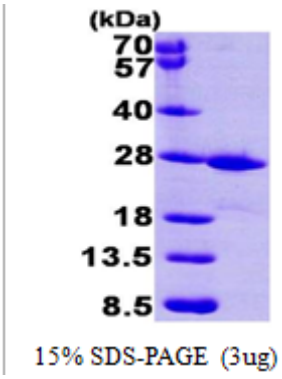
constant using a spectrophotometer.
4. Add 20 ul pre-chilled 5mM suc-AAFP-pNA. (Substrate was dissolved in TFE that contained 460mM LiCl to a concentration of 3 mM)
5. Record the increase in A405 nm for 30 minutes at 25°C.

Pictures:



15% SDS-PAGE (3ug)

Recombinant human FKBP14, 20-211 aa, His-tagged



15% SDS-PAGE (3ug)