

Product Name: FITC-labelled Keap1-Nrf2 probe

Catalog No.: 7627

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₇H₈₁N₁₁O₂₃S
Batch Molecular Weight: 1440.5
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in PBS
Storage: Store at -20°C
Peptide Sequence: FITC-Leu-Asp-Glu-Glu-Thr-Gly-Glu-Phe-Leu-NH₂

2. ANALYTICAL DATA

HPLC: Shows 95.3% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg			Met		
Asx	1.00	1.00	Phe	1.00	0.99
Cys			Pro		
Glx	3.00	3.00	Ser		
Gly	1.00	1.01	Thr	1.00	0.97
His			Trp		
Ile			Tyr		
Leu	2.00	0.98	Val		

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Product Name: FITC-labelled Keap1-Nrf2 probe**Catalog No.:** 7627**1****Description:**

FITC-labelled Keap1-Nrf2 probe is a fluorescent Keap1-Nrf2 peptide ($K_d = 22.3$ nM). It can be used to assess the binding affinities of Nrf2 peptide inhibitors in Fluorescence Polarization (FP) displacement assays and TR-FRET.

Physical and Chemical Properties:Batch Molecular Formula: C₆₇H₈₁N₁₁O₂₃S

Batch Molecular Weight: 1440.5

Physical Appearance: White lyophilised solid

Peptide Sequence:FITC-Leu-Asp-Glu-Glu-Thr-Gly-Glu-Phe-Leu-NH₂**Storage:** Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble to 2 mg/ml in PBS

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Counter Ion: TFA**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Wang *et al* (2020) Development of an enzyme-linked immunosorbent assay for Keap1-Nrf2 interaction inhibitors identification. *Redox Biol.* **34** 101573. PMID: 32422542.

Inoyama *et al* (2012) Optimization of fluorescently labeled Nrf2 peptide probes and the development of a fluorescence polarization assay for the discovery of inhibitors of Keap1-Nrf2 interaction. *J. Biomol. Screen* **17** 435. PMID: 22156223.

Chen *et al* (2011) Kinetic analyses of Keap1-Nrf2 interaction and determination of the minimal Nrf2 peptide sequence required for Keap1 binding using surface plasmon resonance. *Chem. Biol. Drug Des.* **78** 1014. PMID: 21920027.

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