

## Ubiquitin K48R Human

**Description:** Recombinant human ubiquitin featuring a Lys 48 to Arg48 mutation is useful for the reduction of poly-Ub chain length and conjugation rates. Ubiquitin K48R is expressed in E.coli and purified by proprietary chromatographic techniques.

**Catalog #:** PRPS-379

**Synonyms:** Ubiquitin, Ribosomal Protein S27a, CEP80, UBA80, UBCEP1, UBCEP80, HUBCEP80, RPS27A, Ubiquitin K48R.

For research use only.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered clear solution.

**Purity:** Greater than 95% as determined by SDS-PAGE.

**Formulation:**

Diluted in PBS plus 5% glycerol.

**Stability:**

Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please prevent freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

Ubiquitin is a highly conserved 76 amino acid protein expressed in all eukaryotes. Ub is found either in free form or conjugated to proteins as monomer or as chain of ubiquitin molecules. The most well characterized consequence of polyubiquitination is substrate degradation, while mono-ubiquitinated proteins are not degraded. Ubiquitin attachment to protein substrate is a complex process involving a ubiquitin activating enzyme (E1), a ubiquitin conjugating enzyme (E2) and a ubiquitin protein ligase (E3). The first ubiquitin moiety is transferred to the e-NH<sub>2</sub> group of a Lys residue of the protein substrate to generate an isopeptide bond. In successive reactions, a poly ubiquitin chain is synthesized by processive transfer of additional activated moieties to Lys48 of the previously conjugated ubiquitin molecule. Ubiquitin K48R prevents the formation of poly ubiquitin chains via Lys48 linkages with mono ubiquitin molecules, avoiding the degradation of protein substrates.

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