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ProductInformation

Ubiquitin Carrier Protein H2 – GST Tagged
human, recombinant
expressed in *E. coli*

Product Number **U2633**
Storage Temperature –70 °C

Synonyms: UbcH2; E2-14K

Product Description

Ubiquitin carrier protein H2 – GST tagged is a human, recombinant fusion protein expressed in *E. Coli*.

The ubiquitin proteolytic system plays an important role in a broad array of basic cellular processes. Among these are regulation of cell cycle, modulation of the immune and inflammatory responses, development and differentiation, and control of signal transduction pathways. These complex processes are controlled via specific degradation of a single or a subset of proteins. Degradation of a protein by the ubiquitin system involves two successive steps, conjugation with multiple moieties of ubiquitin and degradation of the ubiquitin tagged protein by the 26S proteasome.[1]

Ubiquitin carrier protein H2 (UbcH2) is the human homolog to the yeast enzyme encoded by the DNA repair gene, RAD6, which is induced by DNA damaging agents.[2] UbcH2 is associated with cancer-induced cachexia and the degradation of "N-end rule" substrates. The UbcH2 mRNA level in muscle has also been correlated with sepsis.[3] Moreover, c-Jun and c-Fos transcription factors have been shown to be ubiquitinated by an UbcH2 mediated event.[4] Typical enzyme concentrations to support *in vitro* conjugation are in the range of 100 nM to 1 µM depending on conditions.

This product is supplied as a solution in 50 mM HEPES, pH 7.8, 50 mM NaCl, 10% glycerol, and 1 mM DTT.

Purity: minimum 95% (SDS-PAGE)

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product ships on dry ice and storage at –70 °C is recommended. The product is stable through multiple freeze/thaw cycles.

References

1. Ciechanover, A., The Ubiquitin-mediated proteolytic pathway: mechanisms of action and cellular physiology. Biol. Chem. Hoppe-Seyler, **375**, 565-581 (1994).
2. Koken, M.H., et al., Structural and functional conservation of two human homologs of the yeast DNA repair gene RAD6. Proc. Natl. Acad. Sci., **88**, 8865-8869 (1991).
3. Hobler, S.C., et al., Sepsis is associated with increased ubiquitin conjugating enzyme E214k mRNA in skeletal muscle. Am. J. Physiol., **276**, R468-R473 (1999).
4. Hermida-Matsumoto, M.L., et al., Ubiquitinylation of transcription factors c-Jun and c-Fos using reconstituted ubiquitinylating enzymes. J. Biol. Chem., **271**, 4930-4936 (1996)

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