

**MATERIAL DATA SHEET****K11-Linked FRET Diubiquitin Substrate****TAMRA/QXL Position 4****Cat. # UF-440**

Linkage specific diubiquitin is a substrate for enzymes that cleave the isopeptide linkage between two ubiquitin molecules. These FRET-based DUB substrates with isopeptide bonds between ubiquitin moieties are superior to gel densitometry assays. Since DUBs recognize and cleave substrates with specific steric conditions, each substrate varies in the position of the fluorophore and quencher and must be empirically tested for individual enzymes. Ubiquitination through K11 is important for endoplasmic reticulum-associated degradation (ERAD) and there undoubtedly exist DUBs that may have specificity for K11 linkages.

**Product Information**

<b>Quantity:</b>	50 µg X mg/ml (X µM) in 50 mM Hepes pH 7.5, 150 mM NaCl, 2 mM DTT
<b>Stock:</b>	Concentration varies with lot number.
<b>MW:</b>	17 kDa
<b>Purity:</b>	> 95% by SDS-PAGE

**Use & Storage**

<b>Use:</b>	Typical substrate concentrations range from 100-500 nM and typical enzyme concentrations range from 0.5-10 nM but depend on specific assay conditions and method of detection. Recommended assay buffer is 50 mM Hepes pH 7.5, 150 mM NaCl, 2 mM DTT. Fluorescence can be monitored using Ex544nm and Em572 nm wavelengths.
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Bish R.A. <i>et al.</i> (2008) <i>J. Proteome Res.</i> <b>7</b> :3481-3489 Ikeda F. and Dikic I. (2008) <i>EMBO Rep.</i> <b>9</b> :536-542 Fushman D. and Walker O. (2009) <i>J. Mol. Biol.</i> Jin L. <i>et al.</i> (2008) <i>Cell.</i> <b>133</b> :653-665 Li W. and Ye Y. (2008) <i>Cell. Mol. Life.Sci.</i> <b>65</b> :2397-2496 Lingyan J. <i>et al.</i> (2009) <i>Cell.</i> <b>133</b> :653-665 Pickart C.M. and Fushman D. (2004) <i>Curr.Opin. Chem. Biol.</i> <b>8</b> :610-616 Xu P., <i>et al.</i> (2009) <i>Cell.</i> <b>137</b> :133-145
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