

## KEAP1 Conjugated Antibody

Catalog No: #C32450



Package Size: #C32450-AF350 100ul #C32450-AF405 100ul #C32450-AF488 100ul  
 #C32450-AF555 100ul #C32450-AF594 100ul #C32450-AF647 100ul  
 #C32450-AF680 100ul #C32450-AF750 100ul #C32450-Biotin 100ul

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## Description

Product Name	KEAP1 Conjugated Antibody
Host Species	Rabbit
Clonality	Polyclonal
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of total KEAP1 protein.
Immunogen Description	Recombinant protein of human KEAP1.
Conjugates	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Other Names	INrf2;KIAA0132;KLHL19;MGC10630;MGC1114
Accession No.	Swiss-Prot#:Q14145NCBI Gene ID:9817
Uniprot	Q14145
GeneID	9817;
Excitation Emission	AF350: 346nm/442nm AF405: 401nm/421nm AF488: 493nm/519nm AF555: 555nm/565nm AF594: 591nm/614nm AF647: 651nm/667nm AF680: 679nm/702nm AF750: 749nm/775nm
Calculated MW	70
Formulation	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Storage	Store at 4°C in dark for 6 months

## Application Details

Suggested Dilution:

AF350 conjugated: most applications: 1: 50 - 1: 250

AF405 conjugated: most applications: 1: 50 - 1: 250

AF488 conjugated: most applications: 1: 50 - 1: 250

AF555 conjugated: most applications: 1: 50 - 1: 250

AF594 conjugated: most applications: 1: 50 - 1: 250

AF647 conjugated: most applications: 1: 50 - 1: 250

AF680 conjugated: most applications: 1: 50 - 1: 250

AF750 conjugated: most applications: 1: 50 - 1: 250

Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1: 50 - 1: 1,000

## Product Description

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Antibodies were purified by affinity purification using immunogen.

## Background

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The nuclear factor-like 2 (NRF2) transcriptional activator binds antioxidant response elements (ARE) of target gene promoter regions to regulate expression of oxidative stress response genes. Under basal conditions, the NRF2 inhibitor INrf2 (also called KEAP1) binds and retains NRF2 in the cytoplasm where it can be targeted for ubiquitin-mediated degradation (1). Small amounts of constitutive nuclear NRF2 maintains cellular homeostasis through regulation of basal expression of antioxidant response genes. Following oxidative or electrophilic stress, KEAP1 releases NRF2, thereby allowing the activator to translocate to the nucleus and bind to ARE-containing genes (2). The coordinated action of NRF2 and other transcription factors mediates the response to oxidative stress (3). Altered expression of NRF2 is associated with chronic obstructive pulmonary disease (COPD) (4). NRF2 activity in lung cancer cell lines directly correlates with cell proliferation rates, and inhibition of NRF2 expression by siRNA enhances anti-cancer drug-induced apoptosis (5).

The NRF2 repressor KEAP1 contains an amino terminal BTB/POZ domain and a carboxyl terminal KELCH domain (6,7). The KELCH domain is required for interacting with NRF2 and the BTB/POZ domain functions in binding Cul3 E3 ubiquitin ligase (8-10). Under normal conditions, the complex leads to the cytoplasmic sequestration and ubiquitin-mediated proteasomal degradation of NRF2. Electrophilic modification of KEAP1 leads to disassociation of the NRF2/KEAP1 complex. KEAP1 also targets the down regulation of NF- $\kappa$ B activity by targeting IKK $\beta$  degradation (11).

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Note: This product is for in vitro research use only